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ABSTRACT

This publication discusses the purposes, goals, and activities of the Maryland Research Coordinating Unit for Vocational-Technical Education, which was established in March 1969. Major activities accomplished in 1970 were: (1) design of a vocational-technical student-teacher data system, (2) preparation of a data collection instrument for followup studies of high school students, (3) design of an instrument for estimating planned expenditures, and (4) preliminary plans for evaluating the licensed practical nursing programs in the public schools. Major activities for 1971 include: (1) implementation of the vocational student-teacher data systems, (2) collection of data for the high school graduate followup study, (3) construction and implementation of a program evaluation model, (4) preparation of guidelines for writing and submitting proposals under Part C of the Vocational Education Act of 1963 and the 1968 Amendments, and (5) establishment of a review committee for selecting proposals for funding. These major activities for 1971 are discussed, along with several ancillary accomplishments. Several of the instruments are appended. (SB)

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FINAL REPORT

FOR FISCAL YEAR 1971
(July 1, 1970 - June 30, 1971)

THE MARYLAND VOCATIONAL EDUCATION RESEARCH COORDINATING UNIT

Marinus A. Kip, Director

THE MARYLAND STATE DEPARTMENT OF EDUCATION
DIVISION OF RESEARCH, EVALUATION, AND
INFORMATION SYSTEMS

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I. INTRODUCTION

The Maryland Research Coordination Unit for Vocational-Technical Education was approved and funded in March, 1969 under the provisions of the Vocational Education Act of 1963, P.L. 88-210, Section 4 (c). The initial grant period requested and approved was for six months, 01/01/69 to 06/30/69. Due to the fact that the grant award occurred three-quarters of the way through the school year, the RCU encountered many constraints in staffing and initiating activities related to its goals. For this reason an extension to the grant period was requested and approved through 11/30/69. During this period of time, the provisions of the Vocational Education Amendments of 1968, P.L. 90-576, were implemented with the effect that the initial grant to the Maryland RCU was also the final grant. The new Unit, however, continues to operate under the provisions of Part C of the new legislation.

The Maryland RCU was sponsored by the Maryland State Department of Education and organizationally located in the Division of Research and Development. Lines of authority and support extend to the Division of Vocational-Technical Education. The purposes, goals and activities of the Unit are cooperatively established and reviewed by the two Divisions. The general goals of the Unit were as follows:

1. Identify and study relevant educational issues or problems;

2. Compile, analyze and project demographic, employment opportunity and financial data;
3. Promote and participate in the periodic and regular evaluation and follow-up of all programs;
4. Stimulate, encourage, and cooperate with State colleges and universities, local school districts and nonprofit organizations in the design and implementation of research and development activities,
5. Promote, monitor or conduct appropriate occupational education research and development projects;
6. Maintain liaison with and assist in the coordination of occupational education research and development activities engaged in by persons or organizations within and outside the State;
7. Identify resources available for the design and implementation of vocational-technical education research and development activities -- personnel, funding and settings;
8. Establish and maintain a research reference library and through interface with ERIC and other sources, disseminate research related findings and information;
9. Render consultant and leadership services in planning and conducting seminars, workshops and institutes; and
10. Stimulate, encourage and conduct programs which will result in increased interest and improved competence in research.

During the initial grant period, the RCU was primarily involved in activities related to State Plan Development, the design of data and information collection instruments to facilitate planning, evaluation, and reporting, the design of an evaluation system for vocational-technical education in the State, work preliminary to the design of research in health occupations and industrial arts, and research associated with the development of a curriculum unit in applied mathematics. Each of these efforts is explained in some detail below.

The Proposal submitted to the USOE called for the employment of an RCU Director, a Supervisor of Evaluation, a secretary and a report typist. Upon receipt of the Grant Award, the Director position was filled by a person previously employed as a Supervisor of Planning and Evaluation in the Division of Vocational-Technical Education. In that the grant occurred three-quarters of the way through a school year, however, personnel to fill the other positions were not available. Permission was requested and granted from the USOE to employ a Supervisor of Evaluation as a consultant until such time as he would be available full-time. The Supervisor joined the RCU Staff, full-time, in September 1969. The services of clerical personnel were engaged through an office services agency upon receipt of the grant. Those services were terminated when full-time personnel became available in September 1969. Full staffing, therefore, did not occur until six months after the notification of the grant award.

The equipment purchased in part with federal funds received, following the awarding of the grant, consisted of typical office furniture including such items as desks, chairs, files, tables, bookcases and typewriters. Other items of purchase included a paper-cutter and label maker. No other major items were acquired.

During the first three months following grant notification, the single RCU staff member devoted primary attention to duties assigned in connection with the writing of the first State Plan for Vocational-Technical Education under the Amendments of 1968. Those duties included the responsibility for collecting and analyzing the data and information required under Part II of the Plan, the long-range planning section, as well as the writing involved. In the conduct of this activity, a committee was formed consisting of personnel from the State Departments of Education, Planning, Employment Security, and Economic Development as well as personnel representing both the public secondary schools and the post-secondary schools. In-put to the activity was also obtained from the Maryland Council on Higher Education and the State Department of Health and Mental Hygiene.

As data and information were collected, liaison was established with State program personnel in vocational education, and many conferences were held to formulate objectives for the period FY1970-FY1974. Each established objective was accompanied by an estimate of cost which was incorporated into the total plan.

In addition to the overall responsibility for the long-range section of the State Plan, the RCU was responsible for those sections of Part I, Administration, and Part III, Short-range Plan, related to research and evaluation. Substantial contributions were also made to the portions of the State Plan having to do with exemplary programs.

In connection with this letter, the RCU developed guidelines for use by local education agencies in their application for funds for research, pilot, demonstration, or exemplary programs.

As a culminating activity in State Plan development, the RCU cooperated with the Division of Vocational-Technical Education in the design of long-range planning guidelines for use by the local agencies and the post-secondary schools. The guides developed included forms for reporting projected student enrollment, program characterists, budgets, and all other needs by individual school and the local agency.

Following the preparation of the State Plan, the RCU planned and coordinated a two-day conference at which the various aspects and provisions of the plan were presented and discussed. The conference was attended by over 200 representatives of the local public schools, and several private schools. A review of the procedures and application forms developed by the RCU to guide local annual program planning and budgeting was a highlight of the conference.

Although the involvement in State Plan development during this period was considered to be much broader than appropriate as an annual activity of the RCU, and broader than that called for by the statements of RCU function written for inclusion in that Plan, the experience contributed significantly to the delineation of activities which the RCU could and should undertake. Among these the following were accomplished:

1. Design of the Vocational-Technical Student-Teacher Data System

This activity was initiated in July 1969 and continued throughout the grant period. Initial attention was devoted to the development of a student-teacher data system which would provide program planners and evaluators with compilations of data relative to student and teacher characteristics by school and type of vocational-technical program. The system designed utilized a mark-sensitive form from which bits of data could be stored on magnetic tape, compiled by computer, and arrayed on print-out paper in the format desired. Particular attention was devoted during the design stage to insure that the product produced would also satisfy all known federal reporting requirements.

Following the preliminary work on the system by the RCU, the final design was completed through arrangements with one of the community colleges of the State. That college contracted with a commercial data system consultant for portions of the work required. Copies of the final system input instruments are appended to this report.

2. Follow-Up Study

The RCU was responsible for chairing and guiding the work of the State Committee on a Follow-Up Study of High School Graduates. The deep involvement of the RCU in this study of all graduates, vocational and non-vocational, resulted from the decision that a full evaluation of the impact of vocational-technical education at the secondary level required, among other factors, knowledge of the post high school employment and educational plans and status of all students. It was also recognized that the validity of any follow-up data collected would be greater if obtained through a single study.

Under the leadership of the RCU, the State Committee identified many data elements which they considered would provide program planning and evaluation personnel with information on both post high school placement and student concept of preparation in several areas. Following selection of the data elements, the RCU personnel drafted a mark-sensitive data collection instrument for consideration by the committee. After several revisions, the final instrument was printed for use with all 1970 June graduates from the public and nonpublic high schools in the State. A copy of the final instrument is appended to this report. As with the Student-Teacher Data System, care was exercised to insure that the data collected would satisfy all known federal data requirements.

3. Program Codes

In conjunction with the Student-Teacher Data System and the Follow-Up Study, the RCU excerpted from the USOE State Education Records and Report Series Handbook VI a six-digit program code and description of occupational programs. The descriptions were distributed to each local agency as a guide to standard terminology. The six-digit code will be used by all students and teachers in completing their individual record forms and will provide one basis for the compilation and analysis of data. A less inclusive list of occupations and related codes for distribution with the follow-up study, was also developed. This second list will be used by all graduates whether or not they were enrolled in a vocational program in high school.

4. Survey of Construction Plans

To assist in the projection of needed funds to support the construction, expansion, or updating of facilities for vocational-technical education, the RCU designed an instrument for and conducted a study of local agency plans in this area of activity. The information collected will provide fiscal authorities with an estimate of planned expenditures for the period through FY1975. A copy of the instrument is appended to this report.

5. Regional Evaluation Committees

The Maryland State Plan provides for the formation of a State Steering Committee and for four regional evaluation committees to develop recommendations for and actively participate in the regular and periodic evaluation of all vocational-technical education programs, activities and services. The RCU is responsible for the coordination of the evaluation effort and for the development of the evaluation instruments, techniques, and procedures recommended by the committees.

At the close of the grant period, the RCU had developed guidelines for the formation and conduct of the evaluation committees and had recommended to the State Director, as appointing authority, the appointment of individuals broadly representative of the student body, the community, and the education profession. Consultation with the Planning Committee of the Division of Vocational-Technical Education facilitated the identification of appropriate members for the State Steering Committee.

6. Study of Licensed Practical Nurse Programs

An evaluation study of the licensed practical nurse programs in the public schools of Maryland was requested in June 1969 by the Specialist in Health Occupations. Most of the preliminary literature survey and research design work on the study was completed during the grant period. The study will involve four high school programs and the cooperating hospitals as well as four Licensed Practical Nurse programs not associated with the public schools. Data will be gathered from teachers, school records, graduates and employers to permit the study of congruence between vocational preparation and on-the-job expectation and performance.

7. Quality Improvement Program, Mathematics

Under the leadership of the local supervisor of mathematics, selected mathematics teachers in Baltimore County wrote an extensive curriculum unit in applied mathematics, designed primarily for vocational students in grades 9 and 10. It is intended that this unit will eventually be used throughout the State of Maryland public schools, in answer to a clearly recognized need. In order to provide a rationale for such general use, it was necessary to determine both the effectiveness and the generalizability of the curriculum unit.

The research associated with this program was funded under the provisions of the State Quality Improvement Project administered by the Research and Evaluation Section of the Division of Planning, Research, and Evaluation. At the request of QIP administrator, the RCU provided consultation and research design support. The main features of that support were as follows:

a. Organization and preparation for pilot utilization of the unit by selected teachers in Baltimore, Anne Arundel, Queen Anne's, and Garrett Counties.

b. Construction and administration of instruments designed to obtain student and teacher data with respect to achievement, antecedent conditions, and psychological variables.

c. The collection, analysis, and report of the results.

8. The RCU was requested to participate in a charrette sponsored by Garrett County. The charrette was designed as a vehicle for the collective involvement of students, parents, teachers, and professionals with the needs and aspirations of public education in Garrett County.

Utilizing concepts and techniques in group-dynamics, a thorough assessment of these needs was achieved. Recommendations for immediate, short term, and long-range implementation were generated by the several committees.

The RCU was instrumental in providing solutions to problems experienced by general and vocational students in the areas of science, mathematics, language, social studies, and health.

9. Several questionnaires were completed for research agencies in other states. These included a study of program and institutional accreditation, North Carolina; a study of state and local vocational education planning, National Planning Association; and a study of T and I teacher competency, New Jersey.

10. At the close of the grant period, the RCU was involved in the study and design of three other projects which promised to have implications for vocational-technical education in the State. The three projects were a Profile Study of Industrial Arts, a study of the middle school movement by a State committee, and a program sponsored by the three Appalachian counties concerned with developing teacher concepts of the world of work.

Early in FY1970, the RCU Director was re-assigned to a new position in the Maryland State Department of Education. Accordingly, in December 1969, the Supervisor of Evaluation took over the Director's responsibilities on a temporary basis, doubling with his own position's responsibilities until such a time that a new Director could be assigned. In May 1970, the Supervisor of Evaluation was appointed officially the Director of the Maryland RCU and his evaluation position declared vacant. The vacancy was filled July 1, 1970, by a Specialist III in Evaluation. As is apparent from this historical outline, most of FY1970 the RCU in Maryland was a one man operation. That anything was accomplished at all during this period is testimony to the truly great cooperation, assistance, and encouragement the RCU received from the Division of Vocational-Technical Education and indeed from all with whom the RCU came in contact.

II. MAJOR ACTIVITIES IN FY1971

1. The Vocational Student-Teacher Data System

Implementation of the initial design of the Data System turned out to be a real learning experience. Among the major problems encountered were the following:

a. The use of a single form at all levels: secondary, adult, and post-secondary.

To say that this caused confusion is a classic understatement. Given the widespread differences in terminology, applicability of data elements, and data reporting requirements over these various levels, it was soon apparent that the system was in for a major re-design of data collection forms.

b. The use of an outside computer software house.

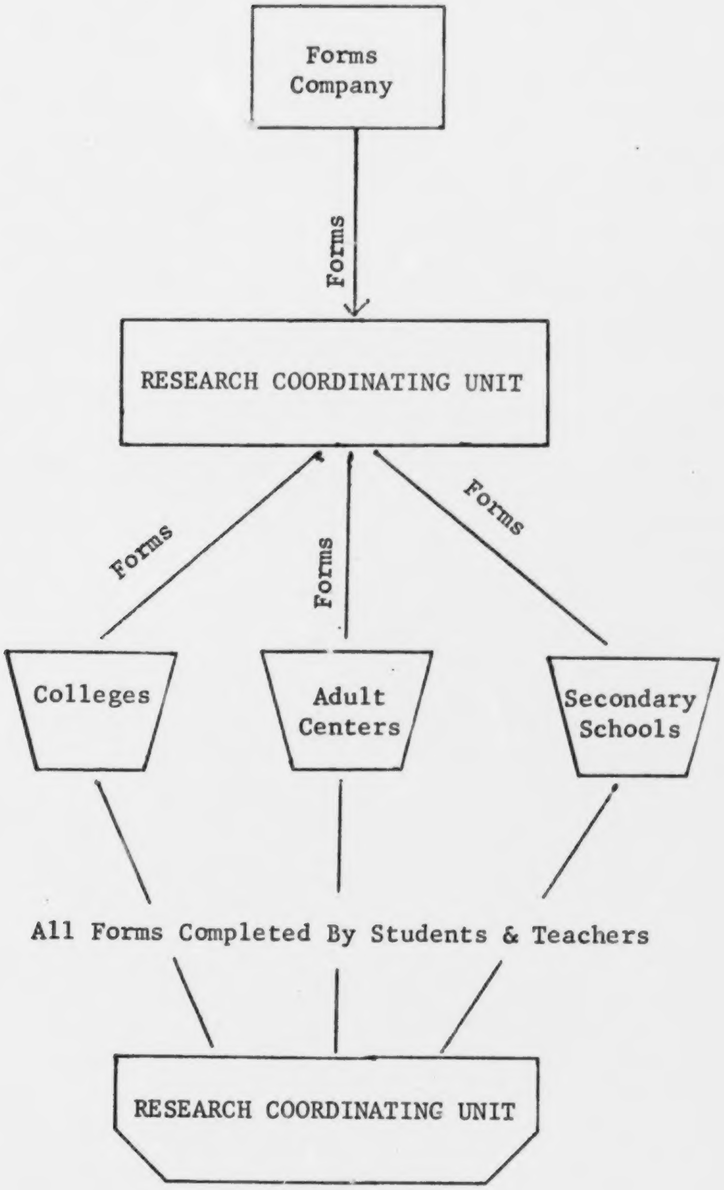
It had been the original intention for required systems design and computer programming to be done "in house". Much because of the shift in personnel reported in Section I of this report, time did not permit for this to occur. Farming out this function to the commercial house engaged proved to be very costly, time consuming, and unproductive in terms of output. This is not reported with the intent to cast a reflection on the commercial house, for it functioned as well or better as could be expected. However, the numerous and complex special problems, the constant changing of output specifications caused by the developing Federal Reporting System, and a limited budget proved to be nearly unsurmountable obstacles.

c. Logistic arrangements.

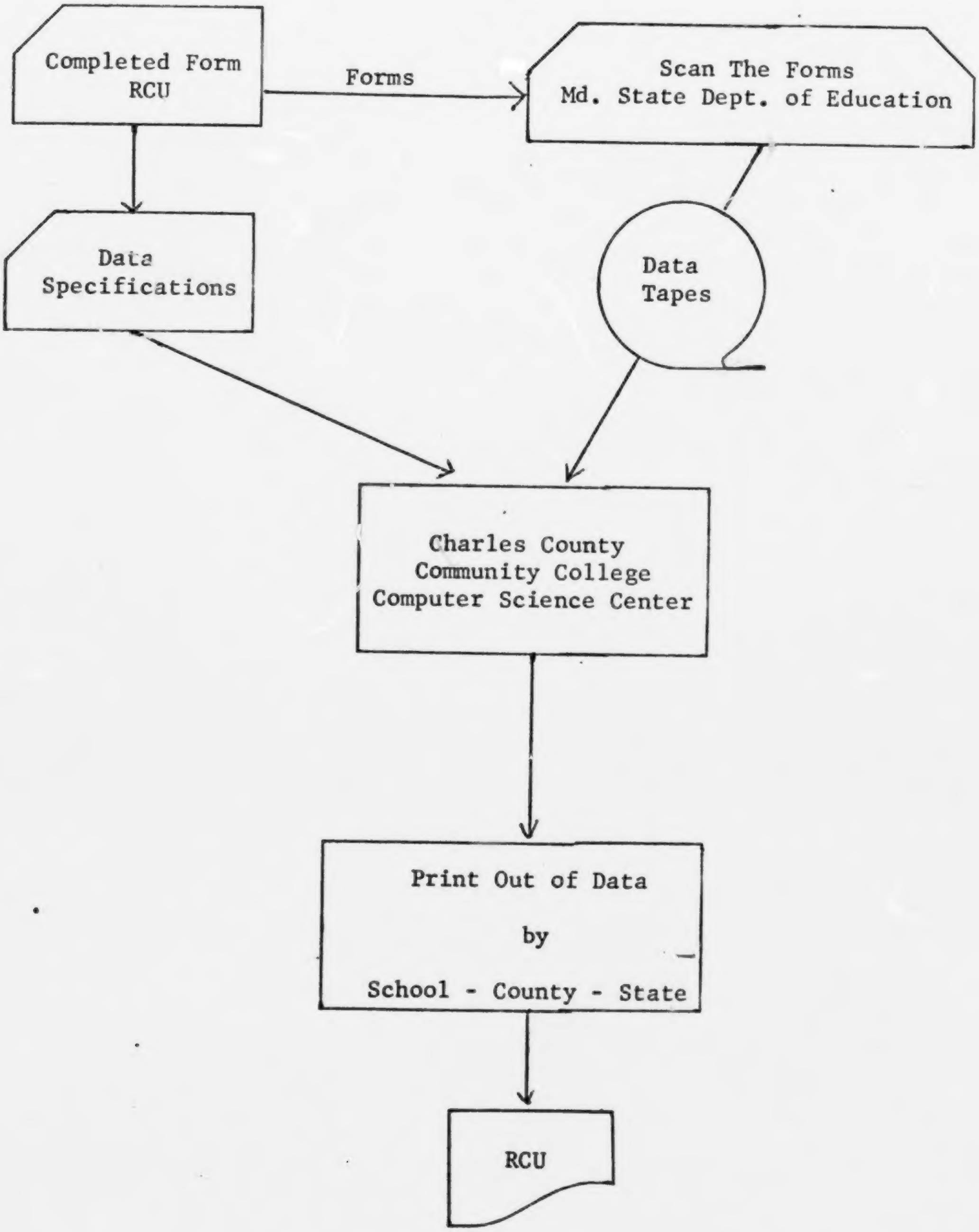
Given the vast number of forms involved (@ 150,000), it was inevitable that the early logistics left much to be desired. It is therefore not surprising that in this area, more than any other, the initial implementation was accepted as a learning experience.

In spite of the above problems, the system nevertheless functioned to the extent that the federal forms 3108 and 3109 with acceptable error margins.

Description of Vocational Student-Teacher Data System now follows, as it was re-designed for FY1971. The vocational population to be counted consisted of College, Adult, and Secondary students and teachers. A form was designed for each of the six unique groups. The creation of separate forms for each group eliminated much confusion on the part of respondents, hence more accurate data was collected. The receiving, disseminating, and collecting of the data forms is graphically depicted below:


Forms Company
Forms
RESEARCH COORDINATING UNIT
Forms
Forms
Forms
Colleges
Adult Centers
Secondary Schools
All Forms Completed By Students & Teachers
RESEARCH COORDINATING UNIT

The next phase of the Vocational Student-Teacher Data System is the processing of the forms, compilation of the data, and the dissemination of the results. A proposal submitted by Charles County Community College was funded for the purpose of processing and compiling the data. The Charles County Community College proposal called for a close working arrangement with the staff of the RCU to insure accurate and timely processing of the data forms. The following is a graphic representation of the procedure:


Completed Form
RCU
Forms
Scan The Forms
Md. State Dept. of Education
Data
Specifications
Data
Tapes
Charles County
Community College
Computer Science Center
Print Out of Data
by
School - County - State
RCU

The final phase of the Vocational Student-Teacher Data System consists of the dissemination and verification of data results. The RCU established a Coordinator in each geographical location for each of the three groups, college, adult, and secondary. The data results are furnished to each Coordinator for verification of results. Documented corrections, if any, are added to or deleted from the data results. The finalized data compilation is delivered to the Division of Vocational-Technical Education for use in planning, evaluating and the completion of Federal Forms 3138 and 3109. A copy of all software used in the Data System, both of the original design and the modified design, is found in Appendix A.

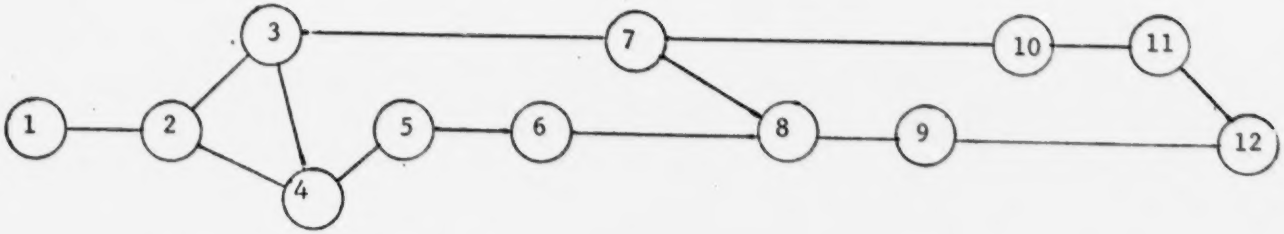
2. The High School Graduate Follow-Up Study

As mentioned in Section I of this report, the RCU provided leadership in the design of the general High School Graduate Follow-Up Study. Once the item content for the questionnaire was specified by the statewide committee, the entire operation of the study became an RCU day to day operation, from form design to final report writing.

The basic strategy for running the study was the distribution of a 5 page optical scan form in May of 1970 to every graduate in the State of Maryland, just before graduation. At this time, the graduates completed Page 1 of the form and entered serial numbers on the remaining pages which were retained for mailing by the schools in the following month of December. This strategy afforded a tie-in to all graduates and the generation of at least some data on a population basis. Page 1 was collected immediately, returned to the RCU, and processed. Pages 2-5 were placed in self-addressed envelopes and mailed in December. Returns were received all during the Spring of 1971. At the moment, the final report is being finished in the RCU and is expected to be published July 28, 1972.

The PERT chart on Page 20 gives an overview of the activities involved in the conduct of the study.

Copies of all software used in the Follow-Up are shown in Appendix B.



1. Item content finalized.
2. Design of the 5-page optical scan questionnaire.
3. Ordering, receipt, and distribution of the forms.
4. Orientation meetings with the staff of each LEA.
5. Administration of Page 1 of the form.
6. Mailing of the forms, Pages 2-5.
7. Writing of computer programs for analyses of results.
8. Receipt of Page 1, scanning and processing.
9. Page 1 results disseminated to LEA's.
10. Receipt of Pages 2-5, scanning and processing.
11. Pages 2-5 results disseminated to LEA's.
12. Writing of Final Report.

3. Vocational-Technical Program Evaluation

From its inception, the RCU has worked hard to construct, promulgate, and help implement a general model for the evaluation of all vocational-technical programs, services and activities. During FY1971 primary effort was expended on the construction of the model, in cooperation with the State Steering Committee for Vocational Program Evaluation and the four Maryland Regional Committees for Vocational Evaluation. A general model was completed, disseminated and accepted for implementation across the State. The FY1972 RCU report will have appended to it a copy of the rather voluminous document describing the model, together with the instrumentation packages currently being developed and necessary for implementation. For the purpose of this report, the following summary outline is submitted:

> "In its simplest form, the management process consists of three basic steps. First, we establish objectives. Then, we direct the attainment of these objectives. And, finally, the results are measured to determine whether the goals were reached. This measurement or evaluation inevitably leads to the creation of new objectives and the continuation of the cycle".
>
> MSDE-DVTE Annual Report, 1971, p.5

Pursuant to the above paragraph, the basic philosophy and strategy underlying the present evaluation model for Vocational-Technical programs in Maryland can be summarized in the following points:

1. Philosophy:

The purpose of evaluation is program improvement. Evaluation of local Vocational-Technical programs should be conducted by those who are responsible for and involved in them, and by those who are affected by them. Without such involvement few significant improvements are likely to occur.

Strategy:

Organize a local evaluation team composed of precisely those who are involved in program planning and operations (e.g. administrators, teachers), and those who are affected by the programs (e.g. students, employers, community).

2. Philosophy:

Local administration is powerful because it can marshall the necessary authority, if not the leadership, to precipitate decisions. It may not be, and frequently is not, the original source of interest in new, or improved programs; but unless it gives them its attention and actively promotes their use, they will not come into being. Thus it is important to obtain its commitment and active participation in the evaluation process from the beginning.

Strategy:

Sell the local administration on evaluation procedures which require their active participation and leadership, rather then their grudging sufferance.

3. Philosophy:

The most widely accepted definition of evaluation calls for a determination of what was supposed to happen to the students (program objectives) and then compare that with what really happened to the students (program outcomes).

Strategy:

Phases I and II of the present model place emphasis on providing an opportunity for those who plan and operate a program to talk, interact, and work together with those effected by the program in a cooperative effort to determine what the community's Vocational program should be like.

Phases II and III then provide a means of joint determination of how the program worked out in reality.

In all phases, the evaluation should always result in the generation of jointly arrived at recommendations for improvement, rather than a rating of the program with reference to outside criteria.

4. Philosophy:

Although the evaluations are to be locally planned and directed, considerable assistance should be provided by State project leaders, program directors and other consultants. The State leaders in effect, should act as change agents to facilitate the conduct of the various evaluation activities.

Strategy:

Ensure the involvement of State personnel in the evaluation team activities. By participating in the establishment of objectives and the interpretation of observational data, these workers can exert a maximum positive influence in the direction of program improvement.

"SUMMARY POINTS"

1. The whole idea behind evaluation is to get the Locals to look at "their program" with a view to finding ways in which they can improve the program.

2. The real activity for the evaluation team is to define the inputs to their program (objectives, staff, equipment, etc.) and then study the outputs from the program, (student achievement, attitude change and experience in the world of work).

3. The necessary and sufficient "instrumentation" to be used by the team is the following:

a. A "work-book" or "guide" style document providing a vehicle for the how and what in objective writing, most pages to be blank.

b. A suggested check-list for inventory taking on all phases of the installation of a program.

c. An individual student profile chart of minimal learning experiences.

d. An instrument for collecting student achievement measures from already existing classroom testing procedures.

e. An instrument for collecting relevant information from the already existing graduate follow-up study.

f. An instrument providing "format" for final reporting.

4. Part C - Research Projects

One of the early RCU concerns and interests was the promotion of Part C research and the lending of assistance in the design and conduct of such projects.

As a first step, the RCU wrote guidelines for the writing and submittal of proposals. A copy of these guidelines is included in Appendix C. Next, a Review Committee was established for the purpose of selection of proposals for funding. The name and title list of this committee follows:

Dr. Kenneth Stough
Department of Industrial Education
J. M. Patterson Building
University of Maryland
College Park, Maryland 20742 PHONE: 454-2343

Dr. James B. League
Consultant in Research
Division of Research, Evaluation and
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Mr. Joseph Smith
Special Assistant to Mayor
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Dr. Gary Brager
Assistant in Research
Board of Education of Baltimore County
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Towson, Maryland 21204 PHONE: 494-4090

Dr. Rosemary Bengel
Consultant in Consumer and Homemaking
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Director
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In order to facilitate the work of the Review Committee, the RCU constructed and applied a Bayesian selection model. The basic workings of this model are described below.

a. Rational

Let n be the number of proposals to be reviewed. Let x be the average number of distinct factors considered for each proposal by any one member of the review committee. Then, for an eight member committee, the number of relevant discussion points or comparative criteria is at least nx^8. If there were 6 proposals and each committee member had only two distinct observations per proposal, the necessary minimal number of discussion points would be $6 \times 2^8 = 1536$. No wonder then, that as a rule such committees get bogged down on the first one or two proposals and "dispense" with the rest in a rather cursory fashion.

b. Objective for the Model

The aim is to provide an opportunity for each member of the committee to bring to bear all available insights on all dimensions of all proposals in an equal fashion.

c. The Bayesian Model in General

The workings of a Bayesian model can be outlined as follows:

Let a_i, $(i = 1,2, \ldots n)$ be n alternative courses of actions. Let $c_{i,j}$ $(i = 1,2, \ldots n,\ j = 1,2 \ldots m_i)$ be the m_i outcomes associated with each action. Let $d_{i,j}$ be the desirability which attaches to each of these outcomes and let p_{ij} be the probability with which each outcome will obtain, given action a_i was taken. Then, the expected desirability of any action a_i is defined as

$$E(a_i) = \sum_{j=1}^{m_i} p_{ij} D_{ij}$$

The result is a ranking of the alternative actions in terms of the expected desirabilities of the outcomes or consequences associated with the taking of each action.

d. The Proposal Selection Model

The working of the Bayesian selection model by the Review Committee is a straight forward application of the Bayesian model described above. The aim is to rank order all the proposals, each realtive to all the others, in terms of expected desirabilities on eight pre-determined dimensions. These are:

1. Justification for Part C funding.
2. Priority in terms of need.
3. Problem statement.
4. Objectives.
5. Hypotheses or questions.
6. Procedures.
7. Personnel.
8. Justification of budget.

Each proposal is now considered an "action". Copies are provided of all proposals for each member of the committee. The dimensions listed above are taken as the outcomes or consequences attached to each proposal. At home, taking as much time as needed, a committee member may now consider each proposal in terms of these dimensions and per dimension assign for each proposal both the desirability and probability of realization. This is done by use of a check sheet, one for each proposal, on which the dimensions are listed together with Likert-type rating scales. On the rating scales, the committee member reflects his estimate of the proposal's goodness of fit to the criteria set forth in the Part C federal legislation with respect to each dimension. These are then weighted multiplied by his estimate of realtive desirability. The products are summed to yield his expected desirability index for the proposal. At the Review Committee meeting, the several indices obtained on each proposal are then averaged. This rank orders the proposals on the basis of every consideration by all members of the Committee. A copy of the check sheet is found in Appendix C.

For FY1971 the following projects were funded:

1. Title: "Research Program to Determine the Manpower Needs and Student Interests for Aviation Industry in Maryland".

   Agency: Frederick Community College, Frederick, Maryland

   Amount: $7,016

2. Title: "Institutional Evaluation: A Comprehensive Follow-Up of all Entrants to the Catonsville Community College from Autumn 1966 through Autumn 1968".

   Agency: Catonsville Community College, Catonsville, Maryland

   Amount: $25,703

3. Title: "Investigating Relationships Between High School and Community College Occupational Programs and Implementing Procedures on an Experimental Basis".

   Agency: Catonsville Community College, Catonsville, Maryland

   Amount: $12,005

4. Title: "Vocational Education Evaluation and Needs Assessment in Baltimore County Public Schools".

   Agency: Baltimore County Public Schools

   Amount: $28,390

5. Title: "Vocational Education Development Project for Disadvantaged".

   Agency: Montgomery County Public Schools

   Amount: $29,888

6. Title: "Computer Assisted Instruction in Overall Vocational Education".

   Agency: Charles County Community College - La Plata, Maryland

   Amount: $100,000

7. Title: "Summer Survey and Returnee Research Project"

   Agency: Baltimore County Public Schools

   Amount: $21,530

8. Title: "The Maryland Vocational Student-Teacher Data System".

   Agency: Charles County Community College

   Amount: $36,000

A summary report of each of these projects is contained in Appendix C.

IV ANCILLARY ACTIVITIES

In addition to the major activities already described, the RCU was engaged in a number of ancillary activities. The following is a brief enumeration:

1. Participation in the review of Exemplary Programs, Part D.
2. Participation in the evaluation of Part D - Exemplary Programs, including on-site visitations.
3. Participation in planning functions and activities of the Division of Vocational-Technical Education, the Maryland State Department of Education.
4. Planning and conduct of numerous workshops, conferences and orientation meetings with Local Education Agency Staff in the area of program evaluation, data collection and follow-up.
5. Participation in the activities of the Maryland State Department of Education's Task Force for Evaluation.
6. Planning and conduct of a study to determine the research priority perceptions for vocational education on the part of the Vocational Division Staff members and LEA vocational staffs.
7. The design and implementation of the Maryland Manpower Survey of the Aviation Industry.
8. Participation by membership on the Maryland Task Force for Career Development.
9. Participation and leadership service to the Regional Fact-Finding Conference on Vocational Education.
10. Service to the Maryland Job Corps Task Force in the area of research and development of evaluation criteria for the Maryland Residential Manpower Center at Woodstock.

SUMMER SURVEY AND RETURNEE RESEARCH

Baltimore County Public Schools

$21,530

Summary of Results Obtained from the School Returnee Survey
Summer 1969

A. Sample:

During the summer 1969, approximately 300 terminal early leavers (TEL) were personally contacted by two counselors employed by the returnee project. This accounted for three-fifths of the 500 total TEL's from the four southeastern area high schools. The object of the contacts was to obtain background data on the TEL's and to find TEL's who would return to day school. The sample of 300 represented those TEL's who were acceptable to the high schools for returning.

Eighty-three TEL's actually returned to day school in September. When the present analysis was performed, near the end of the first term, 63 TEL's were still in school and 20 had dropped again. Of the remaining TEL's from the sample of 300, one hundred indicated interest in night school or equivalency tests. Follow-up on these TEL's indicates most have not pursued these goals. The other 117 had moved, married and/or were in the military and not interested in the program.

B. Subjective Appraisals of the Counselors:

It is important to note that far from being hostile to the counselors, the TEL's were reported to be quite receptive and even happy to see someone from the Board of Education take an interest in them. The TEL's reaction to post-school counseling was similar to the positive findings in this respect of the Baltimore County Graduate Follow-Up Study. The implications for future study of guidance services extended beyond graduation or dropping out are clear.

C. Survey Instrument:

The present analysis was performed upon the 83 TEL's who returned to school. During the interview and from canvassing school records, the counselors were able to complete a survey on each of the 83 TEL's. Similar work is in progress on the remaining TEL's for whom complete or nearly complete surveys are available as well as on a control sample of "walk-in" returnees from roughly comparable non-project high schools.

The School Returnee Survey (SRS) collects data (in numerically coded form) on 33 variables plus identification of school and student. The following table lists the variables.

Table 1. School Returnee Survey Variables

Variable Number	Description
1	Married, single
2	Age (yrs)
3	Sex: boy, girl
4	Father's schooling: less than high school, high school, college
5	Father's employment: yes, no
6	Mother's schooling: (same)
7	Mother's employment: (same)
8	Number of siblings
9	Last school attended
10	Last grade completed
11	When left (fall, spring)
12	Still enrolled, re-dropped
13	Number of suspensions
14	No. grades repeated - elem.
15	No. of grades repeated - jr. high
16	No. of grades repeated - sr. high
17	Why left school (economic, health, academic, discipl., attendance)
18	How decision reached (own, school)
19	7th grade SCAT V
20	7th grade SCAT Q
21	7th grade SCAT T
22	10th grade SCAT V
23	10th grade SCAT Q
24	10th grade SCAT T
25	8th grade ITBS V
26	8th grade ITBS C
27	DAT - mech.
28	DAT - spatial
29	DAT - Cl
30	DAT - abstract reasoning
31	Physically handicapped (yes, no)
32	Job (yes, no)
33	Goal (college, job, other)

D. Results of Survey:

The present analysis was performed upon two groups separately: the 63 TEL's still in school at the end of the first term and the 20 TEL's who had dropped from school a second time. Two types of descriptive analysis were used: intercorrelations among the 33 variables and a principal components factor analysis. The purpose of this statistical treatment was (1) to identify relationships among the 33 variables within the two defined groups of TEL's and (2) to identify differences, if they exist, in the apparent patterns between the groups.

Since there was no random sampling involved or assignments to treatments, no statistical tests of inference were performed between the groups; the present study is descriptive and exploratory in nature.

APPENDIX A

SOFTWARE IN USE WITH THE VOCATIONAL STUDENT-TEACHER DATA SYSTEM

VOCATIONAL-TECHNICAL EDUCATION FOR MARYLAND PUBLIC HIGH SCHOOLS
SECONDARY ENROLLMENT BY PROGRAM: FISCAL YEAR 1970

	TOTAL	AGRICULTURE	BUSINESS AND OFFICE EDUCATION	DISTRIBUTIVE EDUCATION	HEALTH OCCUPATIONS	CONSUMER & HOMEMAKING	OCCUPATIONAL HOMEMAKING	TECHNICAL EDUCATION	DIVERSIFIED OCCUPATIONS	TRADE & IND. EDUC.

VOCATIONAL-TECHNICAL EDUCATION FOR MARYLAND PUBLIC HIGH SCHOOLS
SECONDARY ENROLLMENT BY SPECIAL DATA: FISCAL YEAR 1970

	TOTAL	REMEDIAL	HANDICAPPED	DISADVANTAGED	COOPERATIVE	BELOW GRADE SEVEN	GRADES 7-8	GRADES 9-12	MALE	FEMALE

LIST B
OCCUPATIONAL CODES AND TITLES

AGRICULTURE OCCUPATIONS

010100	Agricultural Production
010200	Agricultural Supplies/Services
010300	Agricultural Mechanics
010500	Ornamental Horticulture
010503	Greenhouse Operation and Management
010504	Landscaping
010506	Turf Management
019900	Other Agriculture

DISTRIBUTIVE AND MARKETING OCCUPATIONS

040100	Advertising Services
040200	Apparel and Accessories
040300	Automotive
040400	Finance and Credit
040500	Floristry
040600	Food Distribution
040700	Food Services
040800	General Merchandise
040900	Hardware, Building Materials, Farm and Garden Supplies and Equipment
041000	Home Furnishings
041100	Hotel and Lodging
041200	Industrial Marketing
041300	Insurance
041400	International Trade
041500	Personal Services
041600	Petroleum
041700	Real Estate
041800	Recreation and Tourism
041900	Transportation
049900	Other Distributive

HEALTH OCCUPATIONS

070101	Dental Assisting
070102	Dental Hygiene
070103	Dental Laboratory Technology
070203	Medical Laboratory Assisting
070301	Nursing (Associate Degree)
070302	Practical (Vocational) Nurse
070303	Nursing Aide (Assistance)
070400	Rehabilitation
070500	Radiologic
070600	Ophthalmic
070700	Environmental Health
070800	Mental Health Technology
070904	Medical Assistant (Physician's Office)
070905	Central Supply Technician
070906	Community Health Aide
079900	Other Health Occupations

HOME ECONOMICS OCCUPATIONS

090201	Care and Guidance of Children
090202	Clothing Management, Production, and Services
090203	Food Management, Production, and Services
090204	Home Furnishings, Equipment, and Services
090205	Institutional and Home Management and Supporting Services
099900	Other Home Economics Occupations

OFFICE OCCUPATIONS

140101	Accountants
140102	Bookkeepers
140103	Cashiers
140104	Machine Operators: Billing, Bookkeeping, and Computing
140105	Tellers
140200	Business Data Processing Systems
140201	Computer and Console Operators
140202	Peripheral Equipment Operators
140301	Duplicating Machine Operators
140302	File Clerks
140303	General Office Clerks
140401	Communication Systems Clerks and Operators
140402	Correspondence Clerks
140403	Mail and Postage Clerks
140404	Mail-handling Machine Operators
140405	Messengers and Office Boys and Girls
140406	Receptionists and Information Clerks
140500	Materials Support: Transporting, Storing, and Recording
140503	Shipping and Receiving Clerks
140504	Stock and Inventory Clerks
140600	Personnel or Training
140701	Executive Secretary
140702	Secretaries
140703	Stenographers
140800	Supervisory and Administrative Management
140900	Typing and Related Occupations
149900	Other Office Occupations

TECHNICAL OCCUPATIONS

160100	Engineering-Related Technology
160105	Chemical Technology
160106	Civil Technology
160108	Electronic Technology
160200	Agriculture-Related Technology
160300	Health-Related Technology
160500	Home Economics-Related Technology
160501	Child Care Center Assistant
160503	Teacher's Assistant at the Primary Level
160603	Forest Technology
160604	Oceanographic Technology
160605	Police
169900	Other Technical Occupations

TRADE AND INDUSTRIAL OCCUPATIONS

170100	Air Conditioning
170200	Appliance Repair
170300	Automotive Services
170301	Body and Fender
170302	Mechanics
170303	Specialization
170400	Aviation Occupations
170600	Business Machine Maintenance
170700	Commercial Art Occupations
170800	Commercial Fishery Occupations
170900	Commercial Photography Occupations
171001	Carpentry
171002	Electricity
171003	Heavy Equipment
171004	Masonry
171005	Painting and Decorating
171006	Plastering
171007	Plumbing and Pipefitting
171008	Dry-Wall Installation
171009	Glazing
171010	Roofing
171100	Custodial Services
171300	Drafting Occupations
171500	Electronics Occupations
171502	Industrial Electronics
171503	Radio/Television
171600	Fabric Maintenance Services
171900	Graphic Arts Occupations
172300	Metalworking Occupations
172302	Machine Shop
172305	Sheet Metal
172306	Welding and Cutting
172400	Metallurgy Occupations
172600	Personal Services
172601	Barbering
172602	Cosmetology
172700	Plastics Occupations
172901	Baker
172902	Cook/Chef
172903	Meat Cutter
172904	Waiter/Waitress
173100	Small Engine Repair
173301	Dressmaking
173302	Tailoring
173402	Shoe Repair
173500	Upholstering
173600	Woodworking Occupations
179900	Other Trade and Industrial Occupations

SCHOOL CODE LIST

01	Allegany Community College
02	Anne Arundel Community College
03	Baltimore College of Commerce
04	Baltimore Institute & Junior College
05	Bowie State College
06	Capital Institute of Technology
07	Catonsville Community College
08	Cecil Community College
09	Charles County Community College
10	Chesapeake College
11	Columbia Union College
12	Community College of Baltimore
13	Coppin State College
14	Dundalk Community College
15	Essex Community College
16	Frederick Community College
17	Frostburg State College
18	Garrett Community College
19	Goucher College
20	Hagerstown Junior College
21	Harford Junior College
22	Hood College
23	Howard Community College
24	Johns Hopkins University
25	Kirkland Hall College
26	Loyola College
27	The Maryland Institute
28	Maryland University of Eastern Shore
29	Maryland University of (Baltimore City)
30	Maryland University of (Baltimore County)
31	Maryland University of (College Park)
32	Montgomery College (Takoma Park Rockville)
33	Morgan State College
34	Mount St. Mary's College
35	Notre Dame, College of
36	Peabody Institute
37	Prince George's Community College
38	St. John's College
39	St. Joseph College
40	St. Mary's College of Maryland
41	St. Mary's Seminary and University
42	Salisbury State College
43	Towson State College
44	University of Baltimore
45	Villa Julie College
46	Washington Bible College
47	Washington College
48	Western Maryland College
49	Other

50	Alabama
51	Alaska
52	Arizona
53	Arkansas
54	California
55	Colorado
56	Connecticut
57	Delaware
58	District of Columbia
59	Florida
60	Georgia
61	Hawaii
62	Idaho
63	Illinois
64	Indiana
65	Iowa
66	Kansas
67	Kentucky
68	Louisiana
69	Maine
70	Massachusetts
71	Michigan
72	Minnesota
73	Mississippi
74	Missouri
75	Montana
76	Nebraska
77	Nevada
78	New Hampshire
79	New Jersey
80	New Mexico
81	New York
82	North Carolina
83	North Dakota
84	Ohio
85	Oklahoma
86	Oregon
87	Pennsylvania
88	Rhode Island
89	South Caroline
90	South Dakota
91	Tennessee
92	Texas
93	Utah
94	Vermont
95	Virginia
96	Washington
97	West Virginia
98	Wisconsin
99	Wyoming
00	Other Country

Maryland State Department of Education
VOCATIONAL EDUCATION STUDENT RECORD

1. Print your name

LAST FIRST

2. Print the name of your school

3. Sex
○ MALE
○ FEMALE

4. In which of the following groups do you consider yourself?
○ BLACK
○ WHITE
○ OTHER

5. Are you married?
○ YES
○ NO

6. Do you have any children?
○ YES
○ NO

7. Mark the highest educational level you have completed.
○ ATTENDED ELEMENTARY
○ COMPLETED ELEMENTARY
○ ATTENDED HIGH SCHOOL
○ COMPLETED HIGH SCHOOL
○ ATTENDED COLLEGE
○ COMPLETED ASSOCIATE DEGREE
○ COMPLETED BACHELOR DEGREE
○ ADVANCED DEGREE

8. Are you enrolled in a private school?
○ YES
○ NO

9. Are you a full time student?
○ YES
○ NO

10. Which of the following represents your present employment status?
○ EMPLOYED FULL TIME
○ EMPLOYED PART TIME
○ NOT EMPLOYED

40 A

11. If you are presently employed, is your job related to the course in which you are enrolled?
○ YES
○ NO

12. Do you expect to complete the program in which you are enrolled this year?
○ YES
○ NO

13. Will you be looking for employment this year in a job related to your course?
○ YES
○ NO

14. SELECT ONE IN THE GROUP (A,B, or C) WHICH APPLIES TO YOU.

A. Secondary Status

Write and mark your grade in the box at the right. If you are an ungraded student write and mark "99" for your grade.

B. Post Secondary Status
○ ASSOCIATE DEGREE 1st YEAR
○ ASSOCIATE DEGREE 2nd YEAR
○ NON - DEGREE

C. Adult Status

Mark the major reason for taking this course.
○ TO PREPARE FOR A JOB
○ TO HELP ON YOUR PRESENT JOB
○ AS PART OF AN APPRENTICESHIP PROGRAM
○ OTHER

15. Using the Office of Education list of instructional codes, select the code which identifies the program in which you are enrolled. Write and mark the code in the box at the right.

16. Print the program name.

17. Is this a work experience program?
○ YES
○ NO

18. If you are a post secondary or adult level student and you were previously enrolled in a vocational program at the secondary level, write and mark the secondary level program code in the box at the right.

19. Print the program name.

20. Was this a work experience program?
○ YES
○ NO

21. Write and mark your age in the box at the right.

22. Write and mark your Social Security Number in the box at the right. If you do not have a Social Security Number write and enter all zeros.

23. Write and mark your school number in the box at the right.

24. Write and mark your zip code in the box at the right.

THIS SECTION IS TO BE COMPLETED BY SCHOOL PERSONNEL

25. A B C D E F G H I J K L

26. A B C D

DC 6494

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MARYLAND STATE DEPARTMENT OF EDUCATION
STATE OFFICE BUILDING
301 WEST PRESTON STREET, BALTIMORE 21201

JAMES A. SENSENBAUGH
STATE SUPERINTENDENT OF SCHOOLS

To the principals of all schools offering vocational education programs:

This letter is written to inform you about the new vocational education student and teacher data system designed to replace the present reporting procedures. The new system is much less complex than previous procedures but promises to provide more usable information.

When the usual forms for reporting pupil membership and school organization were distributed in September, the packet did not include forms for recording information about students and teachers in vocational education. Reference was made to the pending revision of forms for that purpose and the fact that they would be distributed at a later date.

The State Plan for Vocational-Technical Education provides for the consideration of several variables in determining the allocation of funds among the local educational agencies and institutions. Among those variables are the dropout rate, the total number of persons served, the number of disadvantaged persons served, the number of handicapped persons served, and the local expenditure per student. Data for computing the allocation of funds will be compiled from student and teacher forms completed at the local school level and forwarded to this Department. It is, therefore, extremely important that the forms be completed accurately and returned promptly.

The new vocational education student and teacher data system has been designed to collect, in machine-processable form, all current student and teacher data required for regular State and federal reports, long-range and annual plans, evaluation reports and the allocation of funds. Data input to the system will be a one-page, optical scan record for each student and each teacher. The data will be stored on magnetic tape master files at the Maryland State Department of Education. Computer programs and control cards are being prepared to provide printed output tables for any set of specified variables. Each local school system will receive, routinely, copies of all computer printouts concerning the vocational students and teachers in that agency. The standard series of printouts, numbering about 12, will present compilations of data by agency, school, instructional program, and student characteristic.

The vocational education student and teacher data system represents a major effort to reduce the complexity and the number of reports required annually. The single sheet data record for each student and each teacher replaces the DVE Forms numbered 500, 521, 522, 523, 531, 532, and 533 previously required to report vocational education classes, students and teachers. When implemented, the system will provide, for the first time, readily accessible data in parallel dimension and format on all vocational education students and teachers in Maryland.

The packet of materials which accompanies this letter contains the following:

1. An adequate supply of the directions for completing the records so that each vocational education teacher may have a personal copy.
2. An adequate number of Vocational Education Student Records for each vocational education student to complete ONE and ONLY ONE record of his enrollment.
3. An adequate number of Vocational Education Teacher Records for each vocational education teacher to complete ONE and ONLY ONE record of his teaching responsibilities.
4. Two copies of LIST A itemizing all vocational education programs known to be currently offered in your school. Teachers of these programs and the students enrolled will need to know the O.E. Code number and official program title which applies to them.
5. Two copies of LIST B itemizing the titles and code numbers of many occupations. Teachers and students involved in any cooperative work experience program will need to refer to this list to select the title and code which best describes the occupation in which the student is currently cooperatively employed.

Conferences were recently held between the vocational education central office personnel from your school system and State Department of Education personnel. The procedures for completing the Student and Teacher records accurately and promptly were discussed in detail. Do not hesitate to contact your central office for assistance or information.

When all forms for your school have been completed, please forward them to the person named below for transmittal to the State Department of Education.

Your cooperation in this matter is greatly appreciated.

Sincerely yours,

Richard K. McKay
Assistant State Superintendent in
Planning, Research, and Evaluation

MARYLAND STATE DEPARTMENT OF EDUCATION
STATE OFFICE BUILDING
301 WEST PRESTON STREET, BALTIMORE 21201

JAMES A. SENSENBAUGH
STATE SUPERINTENDENT OF SCHOOLS

TO: Directors and Supervisors of Vocational-Technical Education

FROM: James L. Reid, Assistant State Superintendent in Vocational Education

SUBJECT: Vocational Education Student Teacher Data System

This letter is written to inform you about a new vocational education student and teacher data system designed to replace the present reporting system. The vocational education data forms are now being printed and will be sent to all schools supported by State and Federal vocational funds in early March 1970.

The State Plan for Vocational-Technical Education provides for the consideration of several variables in determining the allocation of funds among the local educational agencies and institutions. Among those variables are the dropout rate, the total number of persons served, the number of disadvantaged persons served, the number of handicapped persons served, and the local expenditure per student. Data for computing the allocation of funds will be compiled from student and teacher forms completed at the local school level and forwarded to this Department. It is, therefore, extremely important that the forms be completed accurately and returned promptly.

The new vocational education student and teacher data system has been designed to collect, in machine processable form, all current student and teacher data required for regular State and federal reports, long range and annual plans, evaluation reports and the allocation of funds. Data input to the system will be a one page, optical scan record for each student and each teacher. The data will be stored on magnetic tape master filed at the Maryland State Department of Education. Computer programs and control cards are being prepared to provide printed output tables for any set of specified variables. Each local agency will receive, routinely, copies of all printouts concerning the vocational students and teachers in that agency. The standard series of printouts, numbering about 12, will present compilations of data by agency, school, instructional program, and student characteristic.

The vocational education student and teacher data system represents a major effort to reduce the complexity and the number of reports required annually. The single sheet data record for each student and each teacher replaces the DVE Forms numbered 500, 521, 522, 523, 531, 532, and 533 previously required to report vocational education classes, students and teachers. When implemented, the system will provide, for the first time, readily accessible data in parallel dimension and format on all vocational education students and teachers in Maryland.

Please find enclosed for your information copies of the following materials. (These are typed copies of the materials being printed and are made available now in recognition of the lead time required for internal communication and administrative procedures at the local level.)

1. Vocational Education Student Record
2. Directions for the Student Record
3. Vocational Education Teacher Record
4. Directions for the Teacher Record
5. Letter to all School Principles

Four regional meetings are being planned for the first week in March for all local vocational-technical directors and supervisors to review the materials and procedures and to answer any questions which may arise. Notification of the exact time and place of the meetings will be forwarded as soon as they can be determined. In the interim, please direct any questions concerning the system to Dr. Irving W. Herrick, Coordinator of Research-Vocational Education, ext. 1497.

Your usual fine cooperation in this matter will be greatly appreciated.

Sincerely yours,

James L. Reid

James L. Reid
Assistant State Superintendent in
Vocational Education

MARYLAND STATE DEPARTMENT OF EDUCATION
STATE OFFICE BUILDING
301 WEST PRESTON STREET, BALTIMORE 21201

JAMES A. SENSENBAUGH
STATE SUPERINTENDENT OF SCHOOLS

February 16, 1970

To the Superintendents of Schools:

This letter is written to inform you about a new vocational education student and teacher data system designed to replace the present reporting system.

When the forms for reporting pupil membership and school organization were distributed in September, the packet did not include forms for recording information about students and teachers in vocational education. Reference was made to the pending revision of forms for that purpose and the fact that they would be distributed at a later date. The vocational education data forms are now being printed and will be sent to all schools supported by State and Federal vocational funds about March 1, 1970.

The State Plan for Vocational-Technical Education provides for the consideration of several variables in determining the allocation of funds among the local educational agencies and institutions. Among those variables are the dropout rate, the total number of persons served, the number of disadvantaged persons served, the number of handicapped persons served, and the local expenditure per student. Data for computing the allocation of funds will be compiled from student and teacher forms completed at the local school level and forwarded to this Department. It is, therefore, extremely important that the forms be completed accurately and returned promptly.

The new vocational education student and teacher data system has been designed to collect, in machine-processable form, all current student and teacher data required for regular State and federal reports, long-range and annual plans, evaluation reports and the allocation of funds. Data input to the system will be a one page, optical scan record for each student and each teacher. The data will be stored on magnetic tape master files at the Maryland State Department of Education. Computer programs and control cards are being prepared to provide printed output tables for any set of specified variables. Each local agency will receive, routinely, copies of all printouts concerning the vocational students and teachers in that agency. The standard series of printouts, numbering about 12, will present compilations of data by agency, school, instructional program, and student characteristic.

The vocational education student and teacher data system represents a major effort to reduce the complexity and the number of reports required annually. The single sheet data record for each student and each teacher replaces the DVE Forms numbered 500, 521, 522, 523, 531, 532, and 533 previously required to report vocational education classes, students and teachers. When implemented, the system will provide, for the first time, readily accessible data in parallel dimension and format on all vocational education students and teachers in Maryland.

Please find enclosed for your information copies of the following materials. (These are typed copies of the materials being printed and are made available now in recognition of the lead time required for internal communication and administrative procedures at the local level.)

1. Vocational Education Student Record
2. Directions for completing Student Records
3. Vocational Education Teacher Record
4. Directions for completing Teacher Records
5. Letter of Transmittal to school principals

As soon as the final copies are received from the printer, regional meetings of all local vocational education directors and supervisors will be held to review the materials and to answer any questions which may arise. In the interum, please direct any questions concerning the system to Dr. Irving W. Herrick, Coordinator of Research-Vocational Education, Ext. 1497.

Your cooperation in this matter is greatly appreciated.

Sincerely yours,

Richard K. McKay

Richard K. McKay
Assistant State Superintendent in
Planning, Research, and Evaluation

CC: Dr. Sensenbaugh
Dr. Barnes
Mr. Reid
Dr. Herrick

1971

MARYLAND STATE DEPARTMENT OF EDUCATION
STATE OFFICE BUILDING
301 WEST PRESTON STREET, BALTIMORE 21201

JAMES A. SENSENBAUGH
STATE SUPERINTENDENT OF SCHOOLS

TO: College Faculty and Aides in Vocational-Technical Career Programs

FROM: Maryland State Department of Education

SUBJECT: Directions for Completing College Faculty and Student Record Forms

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Your function as a college faculty member in vocational-technical career preparation is vital to the social and economic welfare of the people of Maryland. It is imperative that every available financial, administrative, and organizational resource be marshalled on your behalf and applied in support of your work. In order that such resources be properly managed from the Federal, State, and Local levels, your cooperation in the administration of a state-wide Management Information System is essential. The Student and Faculty Record forms, to be completed under your direction, form a vital part of this system.

GENERAL DIRECTIONS:

1. Each vocational education college faculty member and aide must complete ONE record and ONLY ONE record. If you also teach a vocational education program at the adult or secondary level, additional forms will be provided at the teaching location.

2. All forms must be completed with a soft (#2) pencil only.

SPECIFIC DIRECTIONS, FACULTY FORMS:

1. Items 1-5 are self-explanatory.

2. Item 6 permits more than one response. Select and mark part-time and/or full-time for all college vocational education instruction you are currently employed to conduct.

3. Item 7 is associated with Item 6 and should be completed ONLY by those instructors who do NOT have a full-time teaching responsibility.

4. Each college has received two copies of a list of the vocational-technical programs offered in that college. The list is marked LIST A. Please refer to LIST A before making any responses to Item 8.

   The response area for Item 8 consists of three rows of four blocks each, marked A, B, C, and D. A separate row must be used to record each different teaching responsibility. Particular attention should be devoted to the following specific directions:

- If you teach one program in one college, use only the top row. In block A, copy the college number from LIST A and mark the corresponding spaces.
  In block B, copy the appropriate program number from LIST A and mark the appropriate spaces.
  In block C, mark the educational levels from which students are currently enrolled.
  In block D, mark all special program characteristics which apply.

- If you teach one program, but in two different colleges, use the first and second rows, repeating the program number.

- If you teach two programs in one college, use the first and second rows, repeating the college number.

- Continue until you have recorded all program teaching responsibilities in all colleges. The third row will be left blank unless you teach at least three different programs or teach in at least three different colleges.

SPECIFIC DIRECTIONS, STUDENT FORM:

1. Items 1-11 are self explanatory.

2. Students should be supplied the necessary information for Item 12 by their counselors. Source of this information must be the LIST A supplied to the college from the Maryland State Department of Education.

3. Items 14-16 are vital, and must be completed by all students.

4. In the lower right hand corner of the form is a section head, DO NOT MARK IN THIS SECTION. This section is to be completed by the Director of Career Programs at the college. The following information will be of assistance in completing this section.

DIRECTIONS TO SCHOOL PERSONNEL FOR THE COMPLETION OF LOWER RIGHT HAND CORNER

For each of the following characteristics which describe a particular student, mark the corresponding letter on his record.

A. Blind or visually handicapped
B. Deaf or hard of hearing
C. Speech impaired
D. Emotionally disturbed
E. Educable mentally retarded
F. Crippled
G. Socio-Economically disadvantaged
H. Has difficulty with science
I. Has difficulty with mathematics
J. Has difficulty with language arts
K. Has difficulty with vocational education

No mark should be made for any of the above characteristics unless there is documentation for them on already existing records. If such documentation does not exist, then none of the above apply, and the Item should be left blank.

Mark the level at which you anticipate the student will continue his or her education after completion of the program in which he or she is currently enrolled.

A. Secondary
B. Post secondary, or 4 year college
C. Adult
D. Not expected to continue

It will be understood that the data from Item 22 will represent the best estimate on the student available to school personnel.

The six columns in the extreme right hand corner of the forms are for use by the State Department of Education. Do not mark in this section.

1971

MARYLAND STATE DEPARTMENT OF EDUCATION
STATE OFFICE BUILDING
301 WEST PRESTON STREET, BALTIMORE 21201

JAMES A. SENSENBAUGH
STATE SUPERINTENDENT OF SCHOOLS

TO: All Teachers and Teacher-Aides of Adult Vocational-Technical Education

FROM: Maryland State Department of Education

SUBJECT: Vocational-Technical Education Data System

Your function as a teacher of adult vocational-technical education is vital to the social and economic welfare of the people of Maryland. It is imperative that every available financial, administrative, and organizational resource be marshalled on your behalf and applied in support of your work. In order that such resources be properly managed from the Federal, State, and Local levels, your cooperation in the administration of a state-wide Management Information System is essential. The Student and Teacher Record forms, to be completed under your direction, form a vital part of this system.

GENERAL DIRECTIONS:

1. Every teacher and teacher-aide of adult vocational-technical education will be asked to complete one Adult Teacher form. If a teacher or a teacher aide also teaches on the secondary or college level, separate forms will be supplied at another time and place.

2. Every adult vocational-technical student will be asked to complete one adult student form. If the student is also enrolled at the college or secondary level, separate forms will be provided at another time and place.

3. All forms must be completed with a soft pencil (#2) only.

SPECIFIC DIRECTIONS, TEACHER FORM:

1. Item 1-5 are self-explanatory.

2. Item 6 permits more than one response. Select and mark part-time and/or full-time for all Adult Vocational Education instruction you are currently employed to conduct.

3. Item 7 is associated with Item 6 and should be completed ONLY by those teachers who do NOT have a full-time teaching responsibility.

4. Item 8 is designed for recording several specific characteristics about each teachers program responsibilities. Each school has received two copies of a list of the vocational education programs offered in that school. The list is marked LIST A. Please refer to LIST A before making any responses to Item 8.

   The response area for Item 8 consists of three rows of four blocks each, marked A, B, C, and D. A separate row must be used to record each different teaching responsibility. Particular attention should be devoted to the following:

   - If you teach ONE program in ONE school, use only the top row. In block A, copy the school number from LIST A and mark the corresponding spaces.
     In block B, copy the appropriate program number from LIST A and mark the appropriate spaces.
     In block C, mark eht educational levels from which students are currently enrolled.
     In block D, mark all special program characteristics which apply.

   - If you teach one program, but in two different schools, use the first and second rows, repeating the program number.

   - If you teach two programs in one school, use the first and second rows, repeating the school number.

   - Continue until you have recorded all program teaching responsibilities in all schools. The third row will be left blank unless you teach at least three different programs or teach in at least three different schools.

SPECIFIC DIRECTIONS, STUDENT FORM:

1. Items 1-15 are self explanatory.

2. In Item 16, the student should enter and mark the same number you marked on the teacher form. Note again, that the source for this number must be the LIST A provided to your school by the Maryland State Department. If you marked more than one number, make sure that the students you proctor are given the number appropriate to their program.

3. Item 16-A is only for those students who were previously enrolled in some program on the secondary level. All others should ignore the item. The necessary information for Item 16-A is supplied to your school on a LIST B. Please obtain a copy of this LIST B from your administrators. Since the code numbers on LIST B consist only of 6 digits, tell students who use it to ignore the seventh digit marking place, farthest to the right, in Item 16-A.

4. Items 17-20 are self explanatory. Since these items ask for vital information, please make sure all students respond to these items.

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MARYLAND STATE DEPARTMENT OF EDUCATION
STATE OFFICE BUILDING
301 WEST PRESTON STREET, BALTIMORE 21201

JAMES A. SENSENBAUGH
STATE SUPERINTENDENT OF SCHOOLS

TO: All Teachers and Teacher-Aides of Secondary Vocational-Technical Education

FROM: Maryland State Department of Education

SUBJECT: Vocational-Technical Education Data System

Your function as a teacher of secondary vocational-technical education is vital to the social and economic welfare of the people of Maryland. It is imperative that every available financial, administrative, and organizational resource be marshalled on your behalf and applied in support of your work. In order that such resources be properly managed from the Federal, State, and Local levels, your cooperation in the administration of a state-wide Management Information System is essential. The Student and Teacher Record forms, to be completed under your direction, form a vital part of this system.

GENERAL DIRECTIONS:

1. Every teacher and teacher-aide of secondary vocational-technical education will be asked to complete one secondary teacher form. If a teacher or a teacher aide also teaches on the adult or college level, separate forms will be supplied at another time and place.

2. Every secondary vocational-technical student will be asked to complete one secondary student form. If the student is also enrolled at the college or adult level, separate forms will be provided at another time and place.

3. All forms must be completed with a soft pencil (#2) only.

SPECIFIC DIRECTIONS, TEACHER FORM:

1. Item 1-5 are self-explanatory.

2. Item 6 permits more than one response. Select and mark part-time and/or full-time for all Vocational Education instruction you are currently employed to conduct.

3. Item 7 is associated with Item 6 and should be completed ONLY by those teachers who do NOT have a full-time teaching responsibility.

4. Item 8 is designed for recording several specific characteristics about each teacher's program responsibilities. Each school has received two copies of a list of the vocational education programs offered in that school. The list is marked LIST A. Please refer to LIST A before making any responses to Item 8.

The response area for Item 8 consists of three rows of four blocks each, marked A, B, C, and D. A separate row must be used to record each different teaching responsibility. Particular attention should be devoted to the following:

- If you teach ONE program in ONE school, use only the top row. In block A, copy the school number from LIST A and mark the corresponding spaces.
  In block B, copy the appropriate program number from LIST A and mark the appropriate spaces.
  In block C, mark the educational levels from which students are currently enrolled.
  In block D, mark all special program characteristics which apply.

- If you teach one program, but in two different schools, use the first and second rows, repeating the program number.

- If you teach two programs in one school, use the first and second rows, repeating the school number.

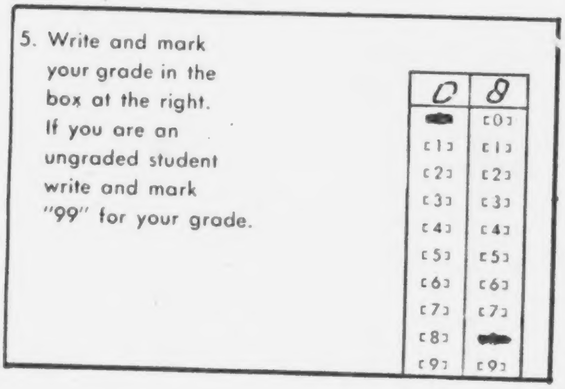
- Continue until you have recorded all program teaching responsibilities in all schools. The third row will be left blank unless you teach at least three different programs or teach in at least three different schools.

SPECIFIC DIRECTIONS, STUDENT FORM:

1. Items 1-4 self-explanatory.

2. Item 5

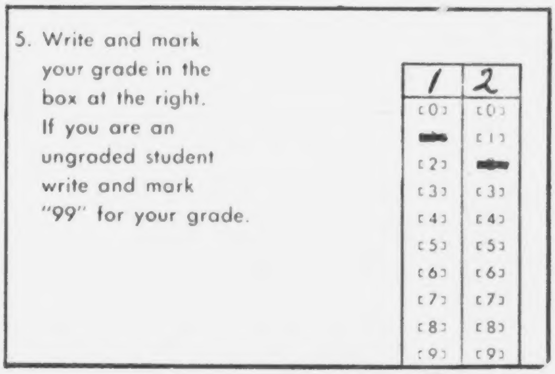
For grades 7,8,9, the first column should contain 0, as in the example on the right



5. Write and mark your grade in the box at the right. If you are an ungraded student write and mark "99" for your grade.

0	8
●	[0]
[1]	[1]
[2]	[2]
[3]	[3]
[4]	[4]
[5]	[5]
[6]	[6]
[7]	[7]
[8]	●
[9]	[9]

For grades 10,11,12, the first column should contain 1, as in the example on the right



5. Write and mark your grade in the box at the right. If you are an ungraded student write and mark "99" for your grade.

1	2
[0]	[0]
▬	[1]
[2]	▬
[3]	[3]
[4]	[4]
[5]	[5]
[6]	[6]
[7]	[7]
[8]	[8]
[9]	[9]

3. Item 6 - thirty hours or more per week is considered full time employment.

4. Item 7 - completion of a program means the completion of all courses called for by the program. For any student other than seniors, the answer is most likely "no".

5. Item 8 - 15 are self-explanatory.

6. Item 16. It is most important that Item 16 is completed correctly, since financial support for programs is related to reported enrollments. The sources for correct program numbers are List A and List B, copies of which have been supplied to each school.

   Determine from List A the number for the student's major program. This number is recorded in Item 16, unless it is one of the following:

   140000 - 4
   150000 - 4
   170000 - 4

   If the program number for a student is one of the three numbers above, then that student is a special Coop student and the number for his/her program is determined as follows:

   1. From List B, select the student's occupational area.

   2. Record the six digit code for that occupartional area in the first six columns of Item 16.

   3. In the extreme right hand column of Item 16, record two digits using the following scheme:

For the List A number	140000-4, record	0 4
" " " "	150000-4, "	0 5
" " " "	170000-4, "	0 7

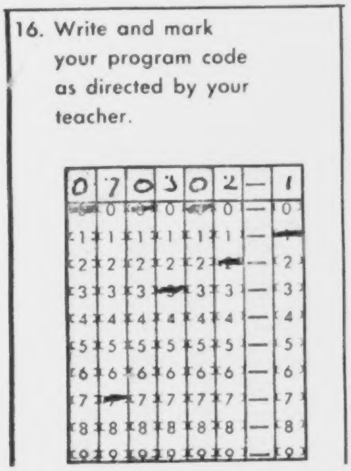
Examples now follow:

"Mary Goodwill is enrolled at Central High as a student in Practical Nursing."

List A for Central High contains the following entry:

Practical Nursing	070302-1

Mary's number in Item 16 is thus:



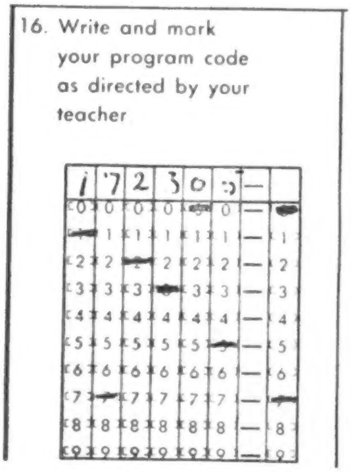
16. Write and mark your program code as directed by your teacher.

0	7	0	3	0	2	—	1

"Joe Doe is a Coop student at Central High, and working at a local machine shop in sheet metal." On Central High's List A appears the following entry:

Cooperative Industrial Work Experience	170000-4

On List B entry: 172305 Sheet Metal
thus, Joe's number in Item 16 is:



16. Write and mark your program code as directed by your teacher

1 7 2 3 0 5 —

Item 16A is for the number of a second program in which a student may be enrolled in addition to his/hers major program.

7. Items 17-20 are self-explanatory.

DIRECTIONS TO SCHOOL PERSONNEL FOR THE COMPLETION OF ITEMS 21 AND 22

21. For each of the following characteristics which describe a particular student, mark the corresponding letter on his record.

    A. Blind or visually handicapped
    B. Deaf or hard of hearing
    C. Speech impaired
    D. Emotionally disturbed
    E. Educable mentally retarded
    F. Crippled
    G. Socio-Economically disadvantaged
    H. Has difficulty with science
    I. Has difficulty with mathematics
    J. Has difficulty with language arts
    K. Has difficulty with vocational education

    No mark should be made for any of the above characteristics unless there is documentation for them on already existing records. If such documentation does not exist, then none of the above apply, and the Item should be left blank.

22. Mark the level at which you anticipate the student will continue his or her education after completion of the program in which he or she is currently enrolled.

    A. Secondary
    B. Post secondary, or 4 year college
    C. Adult
    D. Not expected to continue

    It will be understood that the data from Item 22 will represent the best estimate on the student available to school personnel.

LIST B
OCCUPATIONAL CODES AND TITLES

AGRICULTURE OCCUPATIONS

010100	Agricultural Production
010200	Agricultural Supplies/Services
010300	Agricultural Mechanics
010500	Ornamental Horticulture
010503	Greenhouse Operation and Management
010504	Landscaping
010506	Turf Management
019900	Other Agriculture

DISTRIBUTIVE AND MARKETING OCCUPATIONS

040100	Advertising Services
040200	Apparel and Accessories
040300	Automotive
040400	Finance and Credit
040500	Floristry
040600	Food Distribution
040700	Food Services
040800	General Merchandise
040900	Hardware, Building Materials, Farm and Garden Supplies and Equipment
041000	Home Furnishings
041100	Hotel and Lodging
041200	Industrial Marketing
041300	Insurance
041400	International Trade
041500	Personal Services
041600	Petroleum
041700	Real Estate
041800	Recreation and Tourism
041900	Transportation
049900	Other Distributive

HEALTH OCCUPATIONS

070101	Dental Assisting
070102	Dental Hygiene
070103	Dental Laboratory Technology
070203	Medical Laboratory Assisting
070301	Nursing (Associate Degree)
070302	Practical (Vocational) Nurse
070303	Nursing Aide (Assistance)
070400	Rehabilitation
070500	Radiologic
070600	Ophthalmic
070700	Environmental Health
070800	Mental Health Technology
070904	Medical Assistant (Physician's Office)
070905	Central Supply Technician
070906	Community Health Aide
079900	Other Health Occupations

HOME ECONOMICS OCCUPATIONS

090201	Care and Guidance of Children
090202	Clothing Management, Production, and Services
090203	Food Management, Production, and Services
090204	Home Furnishings, Equipment, and Services
090205	Institutional and Home Management and Supporting Services
099900	Other Home Economics Occupations

OFFICE OCCUPATIONS

140101	Accountants
140102	Bookkeepers
140103	Cashiers
140104	Machine Operators: Billing, Bookkeeping, and Computing
140105	Tellers
140200	Business Data Processing Systems
140201	Computer and Console Operators
140202	Peripheral Equipment Operators
140301	Duplicating Machine Operators
140302	File Clerks
140303	General Office Clerks
140401	Communication Systems Clerks and Operators
140402	Correspondence Clerks
140403	Mail and Postage Clerks
140404	Mail-handling Machine Operators
140405	Messengers and Office Boys and Girls
140406	Receptionists and Information Clerks
140500	Materials Support: Transporting, Storing, and Recording
140503	Shipping and Receiving Clerks
140504	Stock and Inventory Clerks
140600	Personnel or Training
140701	Executive Secretary
140702	Secretaries
140703	Stenographers
140800	Supervisory and Administrative Management
140900	Typing and Related Occupations
149900	Other Office Occupations

TECHNICAL OCCUPATIONS

160100	Engineering-Related Technology
160105	Chemical Technology
160106	Civil Technology
160108	Electronic Technology
160200	Agriculture-Related Technology
160300	Health-Related Technology
160500	Home Economics-Related Technology
160501	Child Care Center Assistant
160503	Teacher's Assistant at the Primary Level
160603	Forest Technology
160604	Oceanographic Technology
160605	Police
169900	Other Technical Occupations

TRADE AND INDUSTRIAL OCCUPATIONS

170100	Air Conditioning
170200	Appliance Repair
170300	Automotive Services
170301	Body and Fender
170302	Mechanics
170303	Specialization
170400	Aviation Occupations
170600	Business Machine Maintenance
170700	Commercial Art Occupations
170800	Commercial Fishery Occupations
170900	Commercial Photography Occupations
171001	Carpentry
171002	Electricity
171003	Heavy Equipment
171004	Masonry
171005	Painting and Decorating
171006	Plastering
171007	Plumbing and Pipefitting
171008	Dry-Wall Installation
171009	Glazing
171010	Roofing
171100	Custodial Services
171300	Drafting Occupations
171500	Electronics Occupations
171502	Industrial Electronics
171503	Radio/Television
171600	Fabric Maintenance Services
171900	Graphic Arts Occupations
172300	Metalworking Occupations
172302	Machine Shop
172305	Sheet Metal
172306	Welding and Cutting
172400	Metallurgy Occupations
172600	Personal Services
172601	Barbering
172602	Cosmetology
172700	Plastics Occupations
172901	Baker
172902	Cook/Chef
172903	Meat Cutter
172904	Waiter/Waitress
173100	Small Engine Repair
173301	Dressmaking
173302	Tailoring
173402	Shoe Repair
173500	Upholstering
173600	Woodworking Occupations
179900	Other Trade and Industrial Occupations

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LIST B
OCCUPATIONAL CODES AND TITLES

AGRICULTURE OCCUPATIONS

010000	Total Agriculture
010100	Agricultural Production
010200	Agricultural Supplies/Services
010300	Agricultural Mechanics
010400	Agricultural Products
010500	Ornamental Horticulture
010600	Agricultural Resources
010700	Forestry
019900	Other*

DISTRIBUTIVE AND MARKETING OCCUPATIONS

040000	Total Distribution
040100	Advertising Services
040200	Apparel and Accessories
040300	Automotive
040400	Finance and Credit
040500	Floristry
040600	Food Distribution
040700	Food Services
040800	General Merchandise
040900	Hardware, Building Materials, Farm and Garden Supplies Equipment
041000	Home Furnishings
041100	Hotel and Lodging
041200	Industrial Marketing
041300	Insurance
041400	International Trade
041500	Personal Services
041600	Petroleum
041700	Real Estate
041800	Recreation and Tourism
041900	Transportation
049900	Other*

HEALTH OCCUPATIONS

070000	Total Health
070101	Dental Assistant
070102	Dental Hygienists (Associate)
070103	Dental Laboratory Technician
070203	Medical Laboratory Assisting
070299	Other Med. Lab. Technology
070301	Nurse, Associate Degree
070302	Practical (Vocational) Nurse
070303	Nurses' Assistance (Aide)
070401	Occupational Therapy
070402	Physical Therapy
070501	Radiologic Technology
070700	Environmental Health
070800	Mental Health Technology
070903	Inhalation Therapy Technician
070904	Med. Assistant
070906	Health Aide
079900	Other*

HOME ECONOMICS OCCUPATIONS

090100	Total Consumer & Homemaking
090101	Child Development
090103	Clothing & Textiles
090104	Consumer Education
090106	Family Relations
090107	Food & Nutrition
090108	Home Management
090109	Housing & Home Furnishings
090199	Other*
090200	Total Occupational Preparation H. Ec.
090201	Care and Guidance of Children
090202	Clothing Management, Production, and Services
090203	Food Management, Production, and Services
090204	Home Furnishing, Equipment and Services
090205	Institutional and Home Management and Supporting Services
090299	Other*

OFFICE OCCUPATIONS

140000	Total Office
140100	Accounting and Computing
140200	Business Data Processing Systems
140300	Filing, Office Machines
140400	Information, Communication Occupations
140500	Materials Support, Transporting, etc. c.
140600	Personnel, Training, and Related
140700	Stenographic, Secretarial, and Related
140800	Supervisory and Administrative Management
140900	Typing and Related Occupations
149900	Other*

TECHNICAL OCCUPATIONS

160000	Total Technical
160101	Aeronautical Technology
160103	Architectural Technology
160104	Automotive Technology
160105	Chemical Technology
160106	Civil Technology
160107	Electrical Technology
160108	Electronics Technology
160109	Electro-Mechanical Technology
160110	Environmental Control Technology
160111	Industrial Technology
160112	Instrumentation Technology
160113	Mechanical Technology
160114	Metallurgical Technology
160117	Scientific Data Processing
160601	Commercial Pilot Training
160602	Fire and Safety Technology
160603	Forestry Technology
160604	Oceanographic Technology
160605	Police Science
169901	Air Pollution Technology
169902	Water and Waste Water Technology
169900	Other*

TRADE AND INDUSTRIAL OCCUPATIONS

170000	Total Trades and Industry
170100	Air Conditioning
170200	Appliance Repair
170301	Body and Fender
170302	Mechanics, Auto
170399	Other Automotive
170400	Aviation Occupations
170500	Blueprint Reading
170600	Business Machine Maintenance
170700	Commercial Art Occupations
170800	Commercial Fishery Occupations
170900	Commercial Photography Occupations
171001	Carpentry
171002	Electricity
171004	Masonry
171007	Plumbing and Pipefitting
171099	Other Constr. & Maintenance
171100	Custodial Services
171200	Diesel Mechanic
171300	Drafting Occupations
171400	Electrical Occupations
171500	Electronic Occupations
171600	Fabric Maintenance Services
171700	Foremanship, Supervision, and Management Development
171900	Graphic Arts Occupations
172000	Industrial Atomic Energy
172100	Instruments Maintenance and Repair
172200	Maritime Occupations
172300	Metalworking Occupations
172400	Metallurgy Occupations
172601	Barbering
172602	Cosmetology
172699	Other Personal Services
172700	Plastics Occupations
172801	Fireman Training
172802	Law Enforcement Training
172899	Other Public Services
172900	Quantity Food Occupations
173000	Refrigeration
173100	Small Engine Repair
173200	Stationary Energy Sources Occupations
173300	Textile Production & Fabrication
173400	Leather Working
173500	Upholstering
173600	Woodworking Occupations
179900	Other*

990000	Special Programs
990100	Group Guidance (Prevocational)
990200	Prepostsecondary
990300	Remedial
990400	Other

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*Other: Specify by title new and emerging occupations and cluster programs.

SCHOOL CODE LIST

01	Allegany Community College
02	Anne Arundel Community College
03	Baltimore College of Commerce
04	Baltimore Institute & Junior College
05	Bowie State College
06	Capital Institute of Technology
07	Catonsville Community College
08	Cecil Community College
09	Charles County Community College
10	Chesapeake College
11	Columbia Union College
12	Community College of Baltimore
13	Coppin State College
14	Dundalk Community College
15	Essex Community College
16	Frederick Community College
17	Frostburg State College
18	Garrett Community College
19	Goucher College
20	Hagerstown Junior College
21	Harford Junior College
22	Hood College
23	Howard Community College
24	Johns Hopkins University
25	Kirkland Hall College
26	Loyola College
27	The Maryland Institute
28	Maryland University of Eastern Shore
29	Maryland University of (Baltimore City)
30	Maryland University of (Baltimore County)
31	Maryland University of (College Park)
32	Montgomery College (Takoma Park, Rockville)
33	Morgan State College
34	Mount St. Mary's College
35	Notre Dame, College of
36	Peabody Institute
37	Prince George's Community College
38	St. John's College
39	St. Joseph College
40	St. Mary's College of Maryland
41	St. Mary's Seminary and University
42	Salisbury State College
43	Towson State College
44	University of Baltimore
45	Villa Julie College
46	Washington Bible College
47	Washington College
48	Western Maryland College
49	Other

50	Alabama
51	Alaska
52	Arizona
53	Arkansas
54	California
55	Colorado
56	Connecticut
57	Delaware
58	District of Columbia
59	Florida
60	Georgia
61	Hawaii
62	Idaho
63	Illinois
64	Indiana
65	Iowa
66	Kansas
67	Kentucky
68	Louisiana
69	Maine
70	Massachusetts
71	Michigan
72	Minnesota
73	Mississippi
74	Missouri
75	Montana
76	Nebraska
77	Nevada
78	New Hampshire
79	New Jersey
80	New Mexico
81	New York
82	North Carolina
83	North Dakota
84	Ohio
85	Oklahoma
86	Oregon
87	Pennsylvania
88	Rhode Island
89	South Carolina
90	South Dakota
91	Tennessee
92	Texas
93	Utah
94	Vermont
95	Virginia
96	Washington
97	West Virginia
98	Wisconsin
99	Wyoming
00	Other Country

DVE 5221 (6 70)

Maryland State Department of Education
COLLEGE FACULTY RECORD FORM

60 A

CC

1. Print your name

LAST

FIRST

2. Write and mark your Social Security Number

0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9

3. Age

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

4. Sex

MALE ☐

FEMALE ☐

5. Race

- ☐ AMERICAN INDIAN
- ☐ NEGRO
- ☐ ORIENTAL
- ☐ SPANISH SURNAME AMERICAN
- ☐ WHITE
- ☐ OTHER

6. What is your current employment status at the college?

FULL TIME	PART TIME	
☐	☐	FACULTY
☐	☐	INSTRUCTIONAL AIDE

7. If you teach Part Time, are you employed in a job related to what you teach?

- ☐ RELATED EMPLOYMENT
- ☐ NON RELATED EMPLOYMENT
- ☐ NOT OTHERWISE EMPLOYED

8. A, B, C, and optional D.

FOR EACH SCHOOL IN WHICH YOU CURRENTLY TEACH, COMPLETE SECTION A, B, AND C. IF THE PROGRAM YOU RECORDED IN SECTION B IS A SPECIAL PROGRAM MARK ALL TERMS IN SECTION D WHICH APPLY TO THAT PROGRAM.

School Number

0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

Program Code

						—
0	0	0	0	0	0	— 0
1	1	1	1	1	1	— 1
2	2	2	2	2	2	— 2
3	3	3	3	3	3	— 3
4	4	4	4	4	4	— 4
5	5	5	5	5	5	— 5
6	6	6	6	6	6	— 6
7	7	7	7	7	7	— 7
8	8	8	8	8	8	— 8
9	9	9	9	9	9	— 9

Educational Status of Students

- ☐ ASSOCIATE DEGREE
- ☐ CERTIFICATE OR NON DEGREE

Special Program Description

- ☐ RELATED REMEDIAL INSTRUCTION
- ☐ COOPERATIVE WORK EXPERIENCE
- ☐ EXEMPLARY
- ☐ PILOT OR DEMONSTRATIVE
- ☐ DISADVANTAGED STUDENTS
- ☐ HANDICAPPED STUDENTS

PRE POST SECONDARY INSTRUCTION

- ☐ RELATED SUBJECT
- ☐ OCCUPATIONAL PREPARATION

School Number

0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

Program Code

						—
0	0	0	0	0	0	— 0
1	1	1	1	1	1	— 1
2	2	2	2	2	2	— 2
3	3	3	3	3	3	— 3
4	4	4	4	4	4	— 4
5	5	5	5	5	5	— 5
6	6	6	6	6	6	— 6
7	7	7	7	7	7	— 7
8	8	8	8	8	8	— 8
9	9	9	9	9	9	— 9

Educational Status of Students

- ☐ ASSOCIATE DEGREE
- ☐ CERTIFICATE OR NON DEGREE

Special Program Description

- ☐ RELATED REMEDIAL INSTRUCTION
- ☐ COOPERATIVE WORK EXPERIENCE
- ☐ EXEMPLARY
- ☐ PILOT OR DEMONSTRATIVE
- ☐ DISADVANTAGED STUDENTS
- ☐ HANDICAPPED STUDENTS

PRE POST SECONDARY INSTRUCTION

- ☐ RELATED SUBJECT
- ☐ OCCUPATIONAL PREPARATION

School Number

0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

Program Code

						—
0	0	0	0	0	0	— 0
1	1	1	1	1	1	— 1
2	2	2	2	2	2	— 2
3	3	3	3	3	3	— 3
4	4	4	4	4	4	— 4
5	5	5	5	5	5	— 5
6	6	6	6	6	6	— 6
7	7	7	7	7	7	— 7
8	8	8	8	8	8	— 8
9	9	9	9	9	9	— 9

Educational Status of Students

- ☐ ASSOCIATE DEGREE
- ☐ CERTIFICATE OR NON DEGREE

Special Program Description

- ☐ RELATED REMEDIAL INSTRUCTION
- ☐ COOPERATIVE WORK EXPERIENCE
- ☐ EXEMPLARY
- ☐ PILOT OR DEMONSTRATIVE
- ☐ DISADVANTAGED STUDENTS
- ☐ HANDICAPPED STUDENTS

PRE POST SECONDARY INSTRUCTION

- ☐ RELATED SUBJECT
- ☐ OCCUPATIONAL PREPARATION

Maryland State Department of Education
COLLEGE STUDENT RECORD FORM

1. Print your name

2. Print the name of your College

3. Sex

—— MALE

—— FEMALE

4. Are you married?

—— YES

—— NO

5. Do you have children?

—— YES

—— NO

6. Race

—— AMER. INDIAN
—— NEGRO
—— ORIENTAL
—— SPANISH AMER.
—— WHITE
—— OTHER

7. What is your employment status?

—— EMPLOYED FULL TIME

—— EMPLOYED PART TIME

—— NOT EMPLOYED

8. If you are employed, is your job related to your program?

—— YES

—— NO

—— DOES NOT APPLY

9. Do you expect to graduate or complete your program this school year?

—— YES

—— NO

10. Will you be seeking a job related to your program this school year?

—— YES

—— NO

11. In each of the three boxes below, mark the [illegible] which best describes your college enrollment.

—— ASSOCIATE DEGREE

—— CERTIFICATE

—— NON-DEGREE

—— FULL TIME

—— PART TIME

—— FRESHMAN

—— SOPHOMORE

—— [illegible]

12. Write the digits of your [illegible] code number

13. Write [illegible]

14. Were you enrolled in a vocational program at the high school level?

—— YES, IN A SIMILAR PROGRAM

—— YES, BUT IN A DIFFERENT PROGRAM

—— NO

15. Write and mark your social security number. If you do not have one, mark all zeros.

16. Write and mark the [illegible]

DO NOT MARK IN THIS SECTION

DVE 5731 (6-70)

Maryland State Department of Education

ADULT VOCATIONAL EDUCATION TEACHER RECORD

1. Print your name:

LAST

FIRST

2. Write and mark your Social Security Number

0 1 2 3 4 5 6 7 8 9

3. Age

0 1 2 3 4 5 6 7 8 9

4. Sex

MALE

FEMALE

5. Race

AMERICAN INDIAN

NEGRO

ORIENTAL

SPANISH SURNAME AMERICAN

WHITE

OTHER

6. What is your current employment status?

FULL TIME PART TIME

TEACHING ADULTS

TEACHER AIDE

7. If you teach Part Time, are you employed in a job related to what you teach?

RELATED EMPLOYMENT

NON-RELATED EMPLOYMENT

NOT OTHERWISE EMPLOYED

8. A, B, C, and optional D.

FOR EACH SCHOOL IN WHICH YOU CURRENTLY TEACH, COMPLETE [illegible]
IF THE PROGRAM YOU [illegible] IN SECTION [illegible] IS A [illegible] PROGRAM, MARK [illegible]
THAT PROGRAM.

School Number	Program Code	Educational Level of Students	Special Program Description
0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	ADULT PREPARATORY ADULT SUPPLEMENTARY ADULT APPRENTICESHIP ADULT OTHER	[illegible]
0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	ADULT PREPARATORY ADULT SUPPLEMENTARY ADULT APPRENTICESHIP ADULT OTHER	[illegible]
0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	ADULT PREPARATORY ADULT SUPPLEMENTARY ADULT APPRENTICESHIP ADULT OTHER	[illegible]

DVE 5235 (8-70)

Maryland State Department of Education
ADULT VOCATIONAL EDUCATION STUDENT RECORD

1. Print your name

Last First

2. Print the name of your school

3. Race

- ☐ AMERICAN INDIAN
- ☐ NEGRO
- ☐ ORIENTAL
- ☐ SPANISH SURNAME AMER
- ☐ WHITE
- ☐ OTHER

4. Sex

MALE ☐
FEMALE ☐

5. Mark the highest educational level you have completed.

- ☐ ATTENDED ELEMENTARY
- ☐ COMPLETED ELEMENTARY
- ☐ ATTENDED HIGH SCHOOL
- ☐ COMPLETED HIGH SCHOOL
- ☐ ATTENDED COLLEGE
- ☐ COMPLETED ASSOCIATE DEGREE
- ☐ COMPLETED BACHELOR DEGREE
- ☐ ADVANCED DEGREE

6. Which of the following represents your present employment status?

- ☐ EMPLOYED FULL TIME
- ☐ EMPLOYED PART TIME
- ☐ NOT EMPLOYED

7. Do your expect to complete the program in which you are enrolled this year?

☐ YES
☐ NO

8. Will you be looking for employment this year in a job related to your program?

☐ YES
☐ NC

9. Print your home address

Number Street

10.

Town or City State Zip Code

11. Are you married?

☐ YES
☐ NO

12. Do you have any children?

☐ YES
☐ NO

13. Are you a full time student?

☐ YES
☐ NO

14. If you are presently employed, is your job related to the course in which you are enrolled?

☐ YES
☐ NO

15. Mark the major reason for taking this course?

- ☐ TO PREPARE FOR A JOB
- ☐ TO HELP ON YOUR PRESENT JOB
- ☐ AS PART OF AN APPRENTICESHIP PROGRAM
- ☐ OTHER

16. Using the Office of Education list of instructional codes, select the code which identifies the program in which you are enrolled.

				—	
⊏0⊐	⊏0⊐	⊏0⊐	⊏0⊐	—	⊏0⊐
⊏1⊐	⊏1⊐	⊏1⊐	⊏1⊐	—	⊏1⊐
⊏2⊐	⊏2⊐	⊏2⊐	⊏2⊐	—	⊏2⊐
⊏3⊐	⊏3⊐	⊏3⊐	⊏3⊐	—	⊏3⊐
⊏4⊐	⊏4⊐	⊏4⊐	⊏4⊐	—	⊏4⊐
⊏5⊐	⊏5⊐	⊏5⊐	⊏5⊐	—	⊏5⊐
⊏6⊐	⊏6⊐	⊏6⊐	⊏6⊐	—	⊏6⊐
⊏7⊐	⊏7⊐	⊏7⊐	⊏7⊐	—	⊏7⊐
⊏8⊐	⊏8⊐	⊏8⊐	⊏8⊐	—	⊏8⊐
⊏9⊐	⊏9⊐	⊏9⊐	⊏9⊐	—	⊏9⊐

Print your Program Name

16-A. If you were previously enrolled in a Vocational program at the secondary level, mark the secondary level program code.

				—	
⊏0⊐	⊏0⊐	⊏0⊐	⊏0⊐	—	⊏0⊐
⊏1⊐	⊏1⊐	⊏1⊐	⊏1⊐	—	⊏1⊐
⊏2⊐	⊏2⊐	⊏2⊐	⊏2⊐	—	⊏2⊐
⊏3⊐	⊏3⊐	⊏3⊐	⊏3⊐	—	⊏3⊐
⊏4⊐	⊏4⊐	⊏4⊐	⊏4⊐	—	⊏4⊐
⊏5⊐	⊏5⊐	⊏5⊐	⊏5⊐	—	⊏5⊐
⊏6⊐	⊏6⊐	⊏6⊐	⊏6⊐	—	⊏6⊐
⊏7⊐	⊏7⊐	⊏7⊐	⊏7⊐	—	⊏7⊐
⊏8⊐	⊏8⊐	⊏8⊐	⊏8⊐	—	⊏8⊐
⊏9⊐	⊏9⊐	⊏9⊐	⊏9⊐	—	⊏9⊐

Print your Program Name

17. Write and mark your age in the box to the right.

⊏0⊐	⊏0⊐
⊏1⊐	⊏1⊐
⊏2⊐	⊏2⊐
⊏3⊐	⊏3⊐
⊏4⊐	⊏4⊐
⊏5⊐	⊏5⊐
⊏6⊐	⊏6⊐
⊏7⊐	⊏7⊐
⊏8⊐	⊏8⊐
⊏9⊐	⊏9⊐

18. Write and mark your Social Security Number in the box at the right. If you do not have a Social Security Number write and enter all zeros.

⊏0⊐	⊏0⊐	⊏0⊐	⊏0⊐	⊏0⊐	⊏0⊐	⊏0⊐	⊏0⊐	⊏0⊐
⊏1⊐	⊏1⊐	⊏1⊐	⊏1⊐	⊏1⊐	⊏1⊐	⊏1⊐	⊏1⊐	⊏1⊐
⊏2⊐	⊏2⊐	⊏2⊐	⊏2⊐	⊏2⊐	⊏2⊐	⊏2⊐	⊏2⊐	⊏2⊐
⊏3⊐	⊏3⊐	⊏3⊐	⊏3⊐	⊏3⊐	⊏3⊐	⊏3⊐	⊏3⊐	⊏3⊐
⊏4⊐	⊏4⊐	⊏4⊐	⊏4⊐	⊏4⊐	⊏4⊐	⊏4⊐	⊏4⊐	⊏4⊐
⊏5⊐	⊏5⊐	⊏5⊐	⊏5⊐	⊏5⊐	⊏5⊐	⊏5⊐	⊏5⊐	⊏5⊐
⊏6⊐	⊏6⊐	⊏6⊐	⊏6⊐	⊏6⊐	⊏6⊐	⊏6⊐	⊏6⊐	⊏6⊐
⊏7⊐	⊏7⊐	⊏7⊐	⊏7⊐	⊏7⊐	⊏7⊐	⊏7⊐	⊏7⊐	⊏7⊐
⊏8⊐	⊏8⊐	⊏8⊐	⊏8⊐	⊏8⊐	⊏8⊐	⊏8⊐	⊏8⊐	⊏8⊐
⊏9⊐	⊏9⊐	⊏9⊐	⊏9⊐	⊏9⊐	⊏9⊐	⊏9⊐	⊏9⊐	⊏9⊐

19. Write and mark your home zip code number in the box to the right.

⊏0⊐	⊏0⊐	⊏0⊐	⊏0⊐	⊏0⊐
⊏1⊐	⊏1⊐	⊏1⊐	⊏1⊐	⊏1⊐
⊏2⊐	⊏2⊐	⊏2⊐	⊏2⊐	⊏2⊐
⊏3⊐	⊏3⊐	⊏3⊐	⊏3⊐	⊏3⊐
⊏4⊐	⊏4⊐	⊏4⊐	⊏4⊐	⊏4⊐
⊏5⊐	⊏5⊐	⊏5⊐	⊏5⊐	⊏5⊐
⊏6⊐	⊏6⊐	⊏6⊐	⊏6⊐	⊏6⊐
⊏7⊐	⊏7⊐	⊏7⊐	⊏7⊐	⊏7⊐
⊏8⊐	⊏8⊐	⊏8⊐	⊏8⊐	⊏8⊐
⊏9⊐	⊏9⊐	⊏9⊐	⊏9⊐	⊏9⊐

20. Write and mark your school number in the box at the right. If your program is not offered in a public school, write and mark all "9's".

⊏0⊐	⊏0⊐	⊏0⊐	⊏0⊐	⊏0⊐	⊏0⊐
⊏1⊐	⊏1⊐	⊏1⊐	⊏1⊐	⊏1⊐	⊏1⊐
⊏2⊐	⊏2⊐	⊏2⊐	⊏2⊐	⊏2⊐	⊏2⊐
⊏3⊐	⊏3⊐	⊏3⊐	⊏3⊐	⊏3⊐	⊏3⊐
⊏4⊐	⊏4⊐	⊏4⊐	⊏4⊐	⊏4⊐	⊏4⊐
⊏5⊐	⊏5⊐	⊏5⊐	⊏5⊐	⊏5⊐	⊏5⊐
⊏6⊐	⊏6⊐	⊏6⊐	⊏6⊐	⊏6⊐	⊏6⊐
⊏7⊐	⊏7⊐	⊏7⊐	⊏7⊐	⊏7⊐	⊏7⊐
⊏8⊐	⊏8⊐	⊏8⊐	⊏8⊐	⊏8⊐	⊏8⊐
⊏9⊐	⊏9⊐	⊏9⊐	⊏9⊐	⊏9⊐	⊏9⊐

THIS SECTION IS TO BE COMPLETED BY SCHOOL PERSONNEL

21. ⊏A⊐ ⊏B⊐ ⊏C⊐ ⊏D⊐ ⊏E⊐ ⊏F⊐
⊏G⊐ ⊏H⊐ ⊏I⊐ ⊏J⊐ ⊏K⊐

22. ⊏A⊐
⊏B⊐
⊏C⊐
⊏D⊐

DVE 521T (8-70)

Maryland State Department of Education
SECONDARY VOCATIONAL EDUCATION TEACHER RECORD

1. Print your name

LAST

FIRST

2. Write and mark your Social Security Number

0 1 2 3 4 5 6 7 8 9 (each of 9 columns)

3. Age

0 1 2 3 4 5 6 7 8 9 (each of 2 columns)

4. Sex

MALE ☐
FEMALE ☐

5. Race

- ☐ AMERICAN INDIAN
- ☐ NEGRO
- ☐ ORIENTAL
- ☐ SPANISH SURNAME AMERICAN
- ☐ WHITE
- ☐ OTHER

6. What is your current employment status?

FULL TIME	PART TIME	
☐	☐	ELEMENTARY TEACHER
☐	☐	ELEMENTARY AIDE
☐	☐	SECONDARY TEACHER
☐	☐	SECONDARY AIDE

7. If you teach Part Time, are you employed in a job related to what you teach?

- ☐ RELATED EMPLOYMENT
- ☐ NON-RELATED EMPLOYMENT
- ☐ NOT OTHERWISE EMPLOYED

8. A, B, C, and optional D.

FOR EACH SCHOOL IN WHICH YOU CURRENTLY TEACH, COMPLETE SECTION A, B, AND C. IF THE PROGRAM YOU RECORDED IN SECTION B IS A SPECIAL PROGRAM MARK ALL TERMS IN SECTION D WHICH APPLY TO THAT PROGRAM.

School Number	Program Code	Educational Level of Students	Special Program Description	
0 1 2 3 4 5 6 7 8 9 (each of 6 columns)	0 1 2 3 4 5 6 7 8 9 (each of 7 columns)	☐ ELEMENTARY ☐ SECONDARY	☐ RELATED REMEDIAL INSTRUCTION ☐ COOPERATIVE WORK EXPERIENCE ☐ EXEMPLARY ☐ PILOT OR DEMONSTRATIVE ☐ DISADVANTAGED STUDENTS ☐ HANDICAPPED STUDENTS	Pre Vocational Instruction: ☐ GROUP GUIDANCE ☐ OCCUPATIONAL ORIENTATION Pre-Post Secondary Education ☐ RELATED SUBJECT ☐ OCCUPATIONAL PREPARATION

School Number	Program Code	Educational Level of Students	Special Program Description	
0 1 2 3 4 5 6 7 8 9 (each of 6 columns)	0 1 2 3 4 5 6 7 8 9 (each of 7 columns)	☐ ELEMENTARY ☐ SECONDARY	☐ RELATED REMEDIAL INSTRUCTION ☐ COOPERATIVE WORK EXPERIENCE ☐ EXEMPLARY ☐ PILOT OR DEMONSTRATIVE ☐ DISADVANTAGED STUDENTS ☐ HANDICAPPED STUDENTS	Pre Vocational Instruction: ☐ GROUP GUIDANCE ☐ OCCUPATIONAL ORIENTATION Pre-Post Secondary Education ☐ RELATED SUBJECT ☐ OCCUPATIONAL PREPARATION

School Number	Program Code	Educational Level of Students	Special Program Description	
0 1 2 3 4 5 6 7 8 9 (each of 6 columns)	0 1 2 3 4 5 6 7 8 9 (each of 7 columns)	☐ ELEMENTARY ☐ SECONDARY	☐ RELATED REMEDIAL INSTRUCTION ☐ COOPERATIVE WORK EXPERIENCE ☐ EXEMPLARY ☐ PILOT OR DEMONSTRATIVE ☐ DISADVANTAGED STUDENTS ☐ HANDICAPPED STUDENTS	Pre Vocational Instruction: ☐ GROUP GUIDANCE ☐ OCCUPATIONAL ORIENTATION Pre-Post Secondary Education ☐ RELATED SUBJECT ☐ OCCUPATIONAL PREPARATION

DVE 5215 (8-70)

Maryland State Department of Education
SECONDARY VOCATIONAL EDUCATION STUDENT RECORD

1. Print your name

Last First

2. Print the name of your school

3. Race

☐ AMERICAN INDIAN
☐ NEGRO
☐ ORIENTAL
☐ SPANISH SURNAME AMER
☐ WHITE
☐ OTHER

4. Sex

MALE ☐
FEMALE ☐

5. Write and mark your grade in the box at the right. If you are an ungraded student write and mark "99" for your grade.

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

6. Which of the following represents your present employment status?

☐ EMPLOYED FULL TIME
☐ EMPLOYED PART TIME
☐ NOT EMPLOYED

7. Do your expect to complete the program in which you are enrolled this year?

☐ YES
☐ NO

8. Will you be looking for employment this year in a job related to your program?

☐ YES
☐ NO

9. Print your home address

Number Street

10.

Town or City State Zip Code

11. Are you married?

☐ YES
☐ NO

12. Do you have any children?

☐ YES
☐ NO

13. Are you enrolled in a private school?

☐ YES
☐ NO

14. Are you a full time student?

☐ YES
☐ NO

15. If you are presently employed, is your job related to the program in which you are enrolled?

☐ YES
☐ NO

16. Write and mark your program code as directed by your teacher.

0	0	0	—	0
1	1	1	—	1
2	2	2	—	2
3	3	3	—	3
4	4	4	—	4
5	5	5	—	5
6	6	6	—	6
7	7	7	—	7
8	8	8	—	8
9	9	9	—	9

Print your Program Name

16-A. If you are enrolled in an additional program, write and mark the program code as directed by your teacher.

0	0	0	—	0
1	1	1	—	1
2	2	2	—	2
3	3	3	—	3
4	4	4	—	4
5	5	5	—	5
6	6	6	—	6
7	7	7	—	7
8	8	8	—	8
9	9	9	—	9

Print your Program Name

17. Write and mark your age in the box to the right.

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

18. Write and mark your Social Security Number in the box to the right. If you do not have a Social Security Number write and enter all zeros.

0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9

19. Write and mark your home zip code number in the box to the right.

0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

20. Write and mark your school number in the box to the right as directed by your teacher.

0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

THIS SECTION IS TO BE COMPLETED BY SCHOOL PERSONNEL

21. A B C D E F
G H I J K

22. A
B
C
D

APPENDIX B

SOFTWARE USED IN THE HIGH SCHOOL GRADUATE FOLLOW-UP STUDY

MARYLAND STATE DEPARTMENT OF EDUCATION
STATE OFFICE BUILDING
301 WEST PRESTON STREET, BALTIMORE 21201

JAMES A. SENSENBAUGH
STATE SUPERINTENDENT OF SCHOOLS

December 1, 1969

To The Superintendents of Public Schools and
Heads of Nonpublic Schools:

Approximately 47,000 students, public and nonpublic, will be graduated from Maryland high schools in June 1970. This number represents more than a 60 percent increase over those graduated one decade ago.

It is perhaps appropriate that an expanded and revised Pupil Data System will be initiated during the 1970 school year -- the year which marks the beginning of a decade. At the outset, the system will be implemented in grades one and seven of the Maryland public schools. Also, in order to expand the available knowledge of the education being provided in all schools of the State, it is essential that there be initiated in this same year a revised follow-up study of all graduates.

All schools in the past have endeavored to collect some data about graduates. Certain items of information have been regularly reported to the State Department of Education. The current need is for comprehensive, accurate data in parallel dimension and format on the total number of graduates. Specifically, a follow-up procedure is needed which will satisfy the following objectives:

1. Determine the post high school placement of all graduates.
2. Determine the relationships between high school preparation and post high school activities and needs.
3. Determine graduate judgment relative to high school preparation in specific curriculum areas.
4. Determine graduate judgment relative to high school preparation and the current usefulness of specific skills and abilities.
5. Determine graduate judgment relative to high school guidance services received and the need for post high school guidance services.

In working toward these objectives, the Follow-Up Subcommittee of the Maryland State Committee on Pupil Data Systems has designed a data collection instrument, enclosed in draft form, for use with the 1970 high school graduates. Also enclosed are draft copies of two PERT charts depicting the proposed series of local and State events necessary for the study. At this time we are requesting your attention to the following three essential steps.

1. Name a person in your agency to maintain liaison with the follow-up study committee.

2. Review the draft material enclosed and forward all recommendations, together with the name of the liaison person, to Dr. Irving W. Herrick, Division of Planning, Research, and Evaluation by December 12, 1969.

3. Request the liaison person to meet with the follow-up study committee on December 15, 1969 at 9:00 A.M. in Room 1004 of the State Office Building.

The follow-up procedures being developed for 1970 graduates will replace the annual follow-up report required of Maryland schools by the State Department of Education. It is proposed that the cost of designing and printing the necessary forms and directions be assumed by the Department and that the cost of postage be borne by the schools. It is estimated that the maximum per graduate postage cost will be 24 cents.

The new follow-up study has been under development for a considerable period of time. The major portion of the study has been pilot tested in the Baltimore County public schools during the years 1967-1969. A Quality Improvement Project funded by the State Department of Education supported that effort in part, because of the state wide implications.

With kindest personal regards.

Sincerely yours,

James A. Sensenbaugh

James A. Sensenbaugh
State Superintendent of Schools

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[illegible] STATE DEPARTMENT of EDUCATION: HIGH SCHOOL GRADUATE FOLLOW-UP QUESTIONNAIRE

[illegible] completely any mark you wish to change. There are 50 questions on the five pages of this questionnaire. [illegible] first page will be completed while you are still in school. The other pages will be mailed to your home next year. We think your [illegible] Thank you for your cooperation.

1. Print your name and address.

LAST NAME FIRST M.I.

NUMBER STREET

CITY STATE ZIP CODE

TELEPHONE NUMBER

2. Print the name and location of your high school.

NAME

CITY

3. Mark the number of years you have attended the school from which you are graduating.

LESS THAN 1 YEAR
1 - 3 YEARS
MORE THAN 3 YEARS

4. Mark the grade you were in when you made your post-high school plans.

BEFORE 9th GRADE
9th GRADE
10th GRADE
11th GRADE
12th GRADE
PLANS NOT YET MADE

5. What is your career goal? (PLEASE PRINT)

6. What are your plans for after graduation?

FULL-TIME EMPLOYMENT
FULL-TIME EDUCATION
PART-TIME EMPLOYMENT
PART-TIME EDUCATION
MILITARY SERVICE
OTHER (MARK, THEN PRINT IN)

7. Have you applied for a job? YES NO

8. Have you applied for admission to a school? YES NO

9. Have you been employed? YES NO

10. Have you been accepted at a school? YES NO

11. Indicate your interest in receiving Post-High School Guidance Services. (MARK ONE)

JOB PLACEMENT
EDUCATIONAL GUIDANCE
PERSONAL GUIDANCE
VOCATIONAL GUIDANCE
NOT INTERESTED

12. In which of the following groups do you consider yourself?

BLACK
WHITE
OTHER

13. Sex

MALE
FEMALE

14.

ENTER AND MARK AS DIRECTED BY YOUR TEACHER

CURRICULUM NUMBER

15. Are you enrolled in a vocational program? YES NO

If yes, ENTER AND MARK ITS NUMBER AS DIRECTED BY YOUR TEACHER

PLEASE ENCODE AS EXAMPLE

1 2 1

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[illegible] DEPARTMENT OF EDUCATION: HIGH SCHOOL GRADUATE FOLLOW-UP QUESTIONNAIRE

[illegible] answers [illegible] you now complete [illegible] read and follow carefully all directions.
[illegible] complete pages 2 and 3.
[illegible] you enter part time or full time, please complete page 4.
[illegible] school, either part time or full time, please complete page 5.

[illegible] completely any mark you wish to change. We think your answers are very [illegible]. Please complete and return the questionnaire as soon as possible.

YOUR NAME

YOUR ADDRESS (IF CHANGED FROM LAST YEAR)

16. Employment St[illegible] (Mark One)

NOT EMP[illegible] AND [illegible] WORK
NOT EMP[illegible] AND [illegible] WORK
EMPLOYED [illegible] HOURS [illegible]
EMPLOYED [illegible] HOURS [illegible]
EMPLOYED [illegible] THAN 40 HOURS WEEK

17. Educational St[illegible] (Mark One)

NOT ATTENDING SCHOOL BUT [illegible] ADMISSION

NOT ATTENDING SCHOOL AND NOT SEEKING [illegible] JOB

ATTENDING [illegible] TIME
ATTENDING [illegible] TIME

18. If both employed [illegible] attending school, [illegible] your course work and [illegible] related?

DOES NOT APPLY
YES
NO

19. If you are not now employed, mark THE major reason.

DOES NOT APPLY (EMPLOYED)
LAY-OFF
EMPLOYMENT NOT AVAILABLE
MARRIED [illegible] PLANNING MARRIAGE
[illegible] JOB [illegible]
LACK [illegible] SKILLS
ATTENDING SCHOOL
MILITARY SERVICE PENDING
UNABLE TO WORK

20. If you are not now attending school, mark THE major reason.

DOES NOT APPLY (ATTENDING SCHOOL)
NOT NEEDED IN MY CHOSEN WORK CAREER
MARRIED [illegible] PLANNING MARRIAGE
MILITARY OBLIGATIONS
TRANSPORTATION PROBLEMS
CANNOT [illegible] SCHOOL OF MY CHOICE
[illegible]
NOT INTERESTED
[illegible]

21. In each column below, mark the degree of aid you feel you received from your High School Guidance Services.

AREAS OF SERVICE

	CAREER PLANNING	SEEKING EMPLOYMENT	PLANNING FOR FUTURE EDUCATION	SEEKING FINANCIAL HELP	MILITARY SERVICE INFORMATION	PERSONAL COUNSELING	RECOGNIZING ONE'S ABILITIES	INTERPRETATION OF TESTS
A GREAT DEAL OF AID								
[illegible] AID								
DID NOT [illegible] AID [illegible]								

22. YOUR SOCIAL SECURITY NUMBER

23. Mark the approximate frequency with which you had contacts with Guidance Counselors during the last 3 years in high school.

VERY FREQUENTLY
FREQUENTLY
SELDOM
NEVER

24. Marital Status

MARRIED
SINGLE
SEPARATED
DIVORCED

PLEASE ENCODE
22948

25. For each skill or ability mark first your opinion of the preparation received in grades 10 - 12.

NEXT, MARK YOUR OPINION OF HOW MUCH EACH IS NEEDED IN YOUR PRESENT STATUS.

	FOLLOW DIRECTIONS	WORK WELL WITH OTHERS	THINK AND MAKE DECISIONS	READ WITH UNDERSTANDING	SPEAK BEFORE GROUPS	SOLVE NUMBER PROBLEMS	WRITE REPORTS, LETTERS	LEAD OTHERS	FOLLOW LEISURE INTERESTS	JOIN IN CIVIC AFFAIRS	USE VOCATIONAL SKILLS	MEET FAMILY RESPONSIBILITIES
DOES NOT APPLY												
EXCELLENT												
SATISFACTORY												
UNSATISFACTORY												
MUCH NEEDED												
LITTLE NEEDED												

26. What is your career goal? (PLEASE PRINT)

27. Indicate your interest in receiving Post-High School Guidance Services. (MARK ONE)

- JOB PLACEMENT
- EDUCATIONAL GUIDANCE
- PERSONAL GUIDANCE
- VOCATIONAL GUIDANCE
- NOT INTERESTED

28. For each course, mark first your opinion of the preparation you received in grades 10 - 12.

NEXT, MARK YOUR OPINION OF HOW SUCH PREPARATION MAY BE IMPROVED.

	ENGLISH	FOREIGN LANGUAGE	SOCIAL STUDIES	SCIENCE	MATHEMATICS	HOME ECONOMICS (NON - VOCATIONAL)	INDUSTRIAL ARTS (NON - VOCATIONAL)	GEN. BUSINESS (NON - VOCATIONAL)	MUSIC	ART	PHYSICAL EDUCATION	VOCATIONAL PREPARATION
COURSE NOT TAKEN												
EXCELLENT												
SATISFACTORY												
UNSATISFACTORY												
PROVIDE MORE COURSES												
INCLUDE MORE CONTENT												
REDUCE EMPHASIS ON GRADES												
PROVIDE MORE INDIVIDUALIZED INSTRUCTION												
STRESS STUDY SKILLS												
NO IMPROVEMENT NECESSARY												

29. What education is required for your career goal? (MARK ONE)

- NO FORMAL EDUCATION IS REQUIRED
- APPRENTICESHIP
- BUSINESS OR TECHNICAL EDUCATION
- COLLEGE TRAINING
- COMPANY ON - THE - JOB TRAINING
- COOPERATIVE WORK/STUDY
- CORRESPONDENCE COURSES
- MILITARY TRAINING
- INFORMAL NIGHT SCHOOL COURSES
- OTHER

PLEASE ENCODE

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COMPLETE THIS PAGE ONLY IF YOU ARE EMPLOYED, EITHER FULL TIME OR PART TIME.

30. Print your specific job title.

31. Print the name and address of your employer.

NAME

NUMBER STREET

CITY STATE ZIP CODE

32. Using the code list provided, select the number corresponding to the nature of your employment. Copy the number in the boxes below and mark the appropriate spaces.

33. Is your job related to your high school vocational education program?

DOES NOT APPLY
YES
NO

34. How many full-time jobs have you held since graduation?

ONE JOB
TWO JOBS
MORE THAN TWO JOBS

35. If you have changed jobs, mark the major reason(s).

DOES NOT APPLY (DID NOT CHANGE)
DISAGREEMENT WITH EMPLOYER
DISAGREEMENT WITH OTHER EMPLOYEES
DISSATISFACTION WITH THE WORK

OPPORTUNITY FOR ADVANCEMENT
TOO MUCH EXPECTED OF ME

WORKING CONDITIONS
TEMPORARY EMPLOYMENT

HEALTH
TRAVELING DISTANCE

MARRIAGE
PREGNANCY

MILITARY SERVICE
SALARY

LAY-OFF
OTHER

36. How did you learn of your present job or employment opportunity?

ADVERTISEMENT
CIVIL SERVICE ANNOUNCEMENT
COMPANY EMPLOYMENT OFFICE
FRIENDS/RELATIVES

PRIVATE EMPLOYMENT AGENCY
RECRUITER/DRAFT

SCHOOL CAREER PROGRAM
SCHOOL COUNSELOR(S)

STATE EMPLOYMENT AGENCY
BUSINESS TEACHER(S)

VOCATIONAL TEACHERS
WORK STUDY COORDINATOR

PLACEMENT COORDINATOR
OTHER

37. What is your approximate weekly income?

LESS THAN $50
$50 - $75
$76 - $100
OVER $100

38. Is your present job a required step for advancement in this company?

YES
NO
DO NOT KNOW

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PLEASE CODE

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COMPLETE THIS PAGE ONLY IF YOU ARE ATTENDING SCHOOL, EITHER FULL TIME OR PART TIME.

39. Print the full name and address of your present school.

NAME

CITY STATE ZIP CODE

40. Who helped you most in choosing the school you are attending? (MARK ONE)

- COLLEGE REPRESENTATIVE(S)
- COUNSELORS
- TEACHERS
- PARENTS
- RELATIVES
- FRIENDS
- OTHER (MARK, THEN WRITE IN)

41. Mark the factor(s) which most influenced your choice of the school you are now attending.

- ADMISSION REQUIREMENTS
- COED OR NON-COED
- COMMUNITY OR STATE SUPPORTED
- EXTRA CURRICULAR ACTIVITIES

- FINANCES
- LOCATION

- PRIVATELY CONTROLLED
- RELIGIOUS AFFILIATION

- SIZE OF SCHOOL
- SCHOOL'S REPUTATION

- SUBJECT OFFERINGS

42. To how many schools did you apply?

- ONE SCHOOL
- TWO SCHOOLS
- THREE SCHOOLS
- MORE THAN THREE SCHOOLS

43. At how many schools were you accepted?

- ONE SCHOOL
- TWO SCHOOLS
- THREE SCHOOLS
- MORE THAN THREE SCHOOLS

44. Were you accepted by the school of your first choice?

- YES
- NO

45. Type of school you are attending.

- MILITARY SERVICE SCHOOL
- US SERVICE ACADEMY
- FOUR YEAR COLLEGE
- COMMUNITY OR JUNIOR COLLEGE
- BUSINESS SCHOOL
- SCHOOL OF NURSING
- TECHNICAL OR TRADE SCHOOL
- ART, DANCE, OR MUSIC SCHOOL
- ADULT EDUCATION PROGRAM
- OTHER (MARK, THEN WRITE IN)

46. When attending school, where do you live?

- DORMITORY
- FRATERNITY OR SORORITY
- OFF-CAMPUS HOUSING
- AT HOME

47. Mark the course(s) in which you received advanced standing.

[illegible]

48. Mark the subject area(s) in which you received advanced standing in college.

[illegible]

49. Mark the area(s) in which you received college credit for advanced standing.

[illegible]

50. Mark the way(s) in which you have been able to obtain the finances necessary to attend school.

[illegible]

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PLEASE

APPENDIX C

GUIDELINES FOR SUBMITTING PROPOSALS UNDER PART C

PART C PROJECT PROPOSAL SELECTION MODEL CHECK SHEET

PART C PROJECT REPORTS FOR FY1971

CHECK SHEET FOR PART C RESEARCH PROPOSALS

PROJECT TITLE:

On each of the dimensions below, rate the project proposal in terms of how well it satisfies the Federal legislative criteria. Use 0 for a lowest possible rating and 4 for a highest possible.

After assignment of ratings, rank order the dimensions themselves relative to the desirability of the project.

Comments	0	1	2	3	4
Justification for Part C Funding					
Priority, Need					
Problem Statement					
Objectives					
Hypotheses or Questions					
Procedures					
Personnel					
Justification of Budget					

0 1 2 3 4

Maryland St

Guidelines for Submitting Proposals

rcu RESEARCH COORDINATING UNIT FOR VOCATI

76

Maryland State Department of Education

s for Submitting Proposals Under Part C

RESEARCH COORDINATING UNIT FOR VOCATIONAL — TECHNICAL EDUCATION

1123 NORTH EUTAW
BALTIMORE, MARYLAND 21201

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Maryland State Department of Education

Guidelines for Submitting Proposals Under Part C

rcu RESEARCH COORDINATING UNIT
FOR
VOCATIONAL — TECHNICAL EDUCATION

1123 NORTH EUTAW
BALTIMORE, MARYLAND 21201

Contents

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and Amendments of 1968 1
Guidelines for the Writing of a Proposal 1
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- Body of Proposal 1
- Problem 1
- Definition of Terms 1
- Objectives 1
- Related Research 2
- Hypotheses or Questions 2
- Procedures 2
- Appendix 3
- Personnel 3
- Budget 3

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Proposal Processing Events 4-5
Flow chart of Proposal Processing Events 4-5
Sample Cover Page 6

Introduction

The Maryland Research Coordinating Unit has been designated by the Division of Vocational-Technical Education to be responsible for the promotion, coordination, evaluation, and dissemination of occupational research under the Vocational Education Act of 1963, Part C, and its amendments of 1968. Section 131a of the amendments provides funds for grants and contracts which may be used for:

1. research in vocational education;
2. training programs designed to familiarize persons involved in vocational education with research findings and successful pilot and demonstration projects in vocational education;
3. experimental, developmental, and pilot programs and projects designed to test the effectiveness of research findings;
4. demonstration and dissemination projects;
5. the development of new vocational education curricula; and
6. projects in the development of new careers and occupations, such as —
    - research and experimental projects designed to identify new careers in such fields as mental and physical health, crime prevention and correction, welfare, education, municipal services, child care, and recreation requiring less training than professional positions and to delineate within such careers roles with the potential for advancement from one level to another;
    - training and development projects designed to demonstrate improved methods of securing the involvement, cooperation, and commitment of both the public and private sectors toward the end of achieving greater coordination and more effective implementation of programs for the employment of persons in the fields described in the preceding paragraph, including programs to prepare professionals (including administrators) to work effectively with aides; and
    - projects to evaluate the operation of programs for the training, development, and utilization of public service aides, particularly their effectiveness in providing satisfactory work experiences and in meeting public needs.

Guidelines for the Writing of a Proposal

COVER PAGE

Each proposal must have a cover page with content and format as shown by the sample cover on page 6.

BODY OF THE PROPOSAL

The body of the proposal should contain the following elements:

1. **Problem** — The problem is an interrogative sentence or statement that asks: "What relation exists between two or more variables?" The statement should be succinct and summarize the point being studied. The problem statement implies that testing or experimentation will yield an answer. It should be remembered that the purpose and/or aims of a study may differ from the problem. The most common error made concerning the problem statement is the usage of too general terms. Limit the problem to one which can be solved by the research proposed.
2. **Definition of Terms** — Unusual terminology used in the study should be defined.
3. **Objectives** — Include aims and purposes which the study will explore. The proposal should have well-defined objectives that can be carried out in pre-determined periods of time. The significance of the activity for educational

improvement beyond the local setting should be included.

4. **Related Research** — The proposal must reflect the necessary knowledge of the area to be studied. It is important that the initiator be familiar with previous research, articles, and information relative to the area of study to be undertaken. A supported and well documented review of the literature which supports the need for the proposal should be cited. The review should illustrate (in a smooth-flowing manner) what has been done, is going on, and projected in the field. It should lead the reader to the need or rationale for the proposed project. Professional opinion supported by published or unpublished documents may be included.
5. **Hypotheses or Questions** — Hypotheses are always in the form of a declarative sentence. They are statements about the relations between variables and state clearly their testing potentiality. Hypotheses state concepts or theories in a testable or near-testable form. Generally speaking, hypotheses are predictions which the investigator makes concerning the outcomes of the study. When a study is concerned with experimentation not based or directly related to an existing theory, it is best that "questions" be used. Since the use of a null hypothesis is part of a statistical testing procedure, its use is restricted to just such a procedure. A *research* hypotheses should *never* be in the null form.
6. **Procedures** — This section depicts what is to be done and how it will be accomplished in order to test each hypothesis or question. It is usually the most carefully read section of the proposal. Depending on the statistical technique employed, the research hypothesis is sometimes re-written in the null form, for the purpose of applying the selected statistical test *only*. Sequential steps stated in the research design may include:

   - POPULATION OR UNIVERSE — is the larger group from which representative samples to be studied are selected. The characteristics of the population are an operational definition of the group to whom the study is generalizable.
   - SAMPLE — is a particular group of people or observations which are selected for investigation. This group or groups are selected from the universe by employing a specific sampling technique, i.e., stratified, area, cluster sampling, randomized, etc. The description and nature of the technique used should be concise but thorough.

     A sample should be of sufficient size to make the study meaningful and the results generalizable. Provide as much descriptive information as possible concerning the sample.
   - DESIGN — Indicates how and by what methods the researcher proposes to answer the problem. He should choose a design which best fits his problem. Some studies may use such techniques as case studies, questionnaires, analytical tapes, etc. Experimental studies indicate how the situation will be structured to control variable and/or administer treatment.
   - DATA — List the kinds of data to be gathered and describe the measures to be used. Indicate their appropriateness. Explain the methods of data collection.
   - INSTRUMENTATION — The instruments chosen for use in the study must have acceptable degrees of both validity and reliability. Validity is the degree to which an instrument does in fact measure what it is claimed to measure. Reliability is the consistency with which an instrument produces measures upon repeated application. Evidence of validity and reliability should always be appended.
   - ANALYSIS OF DATA — The method(s) or technique(s) used to analyze the data should be consistent with the objectives and the design. A step by step description of how the data is to be handled to reach logical conclusions should be stated. Statistical techniques are those mathematical procedures used to treat the data collected in order to answer the hypothesis of questions. One or more techniques may be employed depending on the amounts and kinds of data and/or instruments used. Examples of techniques are chi square, t-test, analysis of variance, etc.

7. **Appendix** — Included in the appendix is anything which would disrupt the reader's logical flow of understanding while reading the body of the proposal but would clarify or add to his knowledge of particular areas, i.e., copies of instruments, definitions of specific variables.

8. **Personnel** — List name, title, and a brief statement of the educational background and occupational experience of the principal investigator who will be directly in charge of the project. The investigator must have at his disposal qualified personnel to carry out the objectives of the study. Include a similar sketch for any other key personnel (such as the person who will perform statistical analyses or write the report). General duties of key personnel should be stated briefly.

9. **Budget** — On a separate page estimate the cost of the proposed study. The budget must show funds needed beyond those normally considered for regular instructional or management programs. Allocated funds are not considered as outright grants but allowable costs for actual proposal expenses incurred against approved budget estimates. Allowable costs include the following:

   - PERSONNEL SALARIES
     (1) Consultants and other professionals on full-time, part-time, per-diem, or hourly basis.

     Costs for research design, data gathering, and other services necessary to document the research study. (Avoid unnecessary personnel. Keep in mind the economic efficiency of the proposal in that the sponsoring agency may have personnel with expertise who may be consulted without fees.)

     (2) Secretarial assistance. Clerical work on a part-time, per diem, or hourly basis.
   - TRAVEL AND LODGING
     (1) Fares, purpose of travel, and number of days involved.
     (2) Estimated mileage or public conveyance at the rate customarily paid by the sponsoring institution.
     (3) Lodging on a per diem basis at the rate customarily paid by the sponsoring institution.
   - SUPPLIES
     (1) Stationery, supplies, postage.
     (2) Duplicating and printing by the sponsoring institution. (Where no facilities exist, the Research Coordinating Unit will supply this service.)
     (3) Telephone.
   - FRINGE BENEFITS
     (1) Retirement
     (2) Social Security
     (3) Health Insurance
     (4) Workmen's Compensation
   - MISCELLANEOUS — Includes all other legitimate costs associated with development of the project which are not listed elsewhere. All such costs must be itemized.

Reporting and Evaluation Requirements

Once a project has been funded under Part C, it will be necessary to submit a mid-project and an end-of-project report to the Review Committee. The Research Coordinating Unit will receive and transmit these reports.

The mid-project report should consist of a concise statement of progress achieved, together with any problems and difficulties encountered.

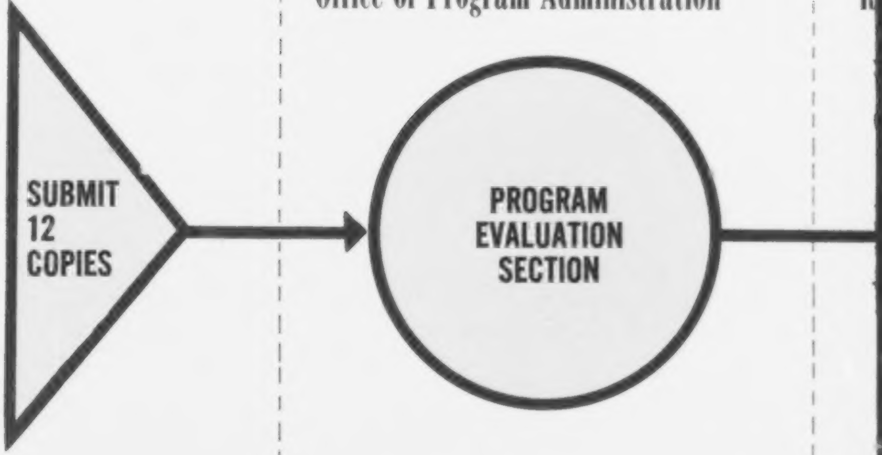
The end-of-project report should contain a complete and detailed description of all results, accomplishments, expenditures and evaluation.

In the case of a proposal for pure research, the reported results and conclusions constitute an evaluation of the project. However, since many of the projects funded under Part C cannot be properly classified as pure research, it will be necessary to include in the proposal a design for evaluation procedures. An excellent guide for the preparation and use of evaluation procedures is the publication by the U.S. Department of Health, Education, and Welfare, No. HE 5 210:10065, entitled: "Preparing Evaluation Reports, a Guide for Authors".

Proposal Processing Events

Office of Program Administration

R


SUBMIT
12
COPIES
PROGRAM
EVALUATION
SECTION

4

Twelve copies of the proposal are deposited with the office of program administration, in care of the specialist for program evaluation. The proposal is logged in and assigned appropriate control and project classification codes.

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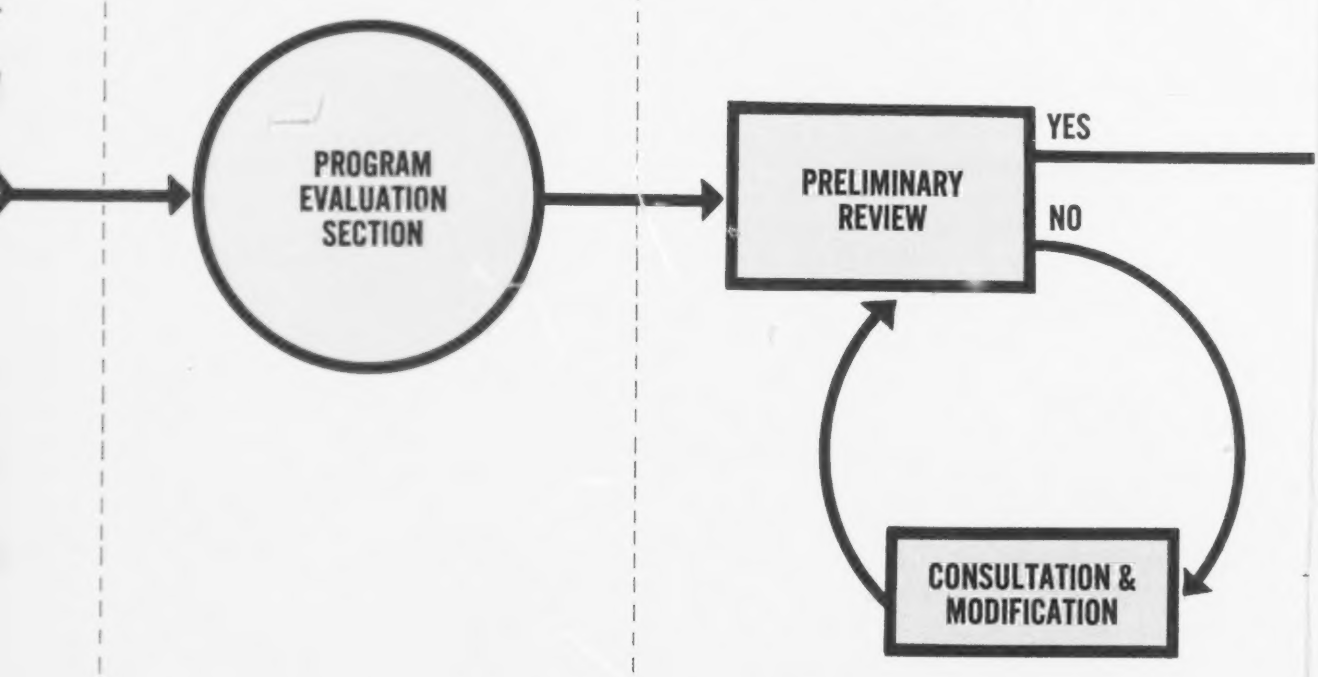
Office of Program Administration

Research Coordinating Unit

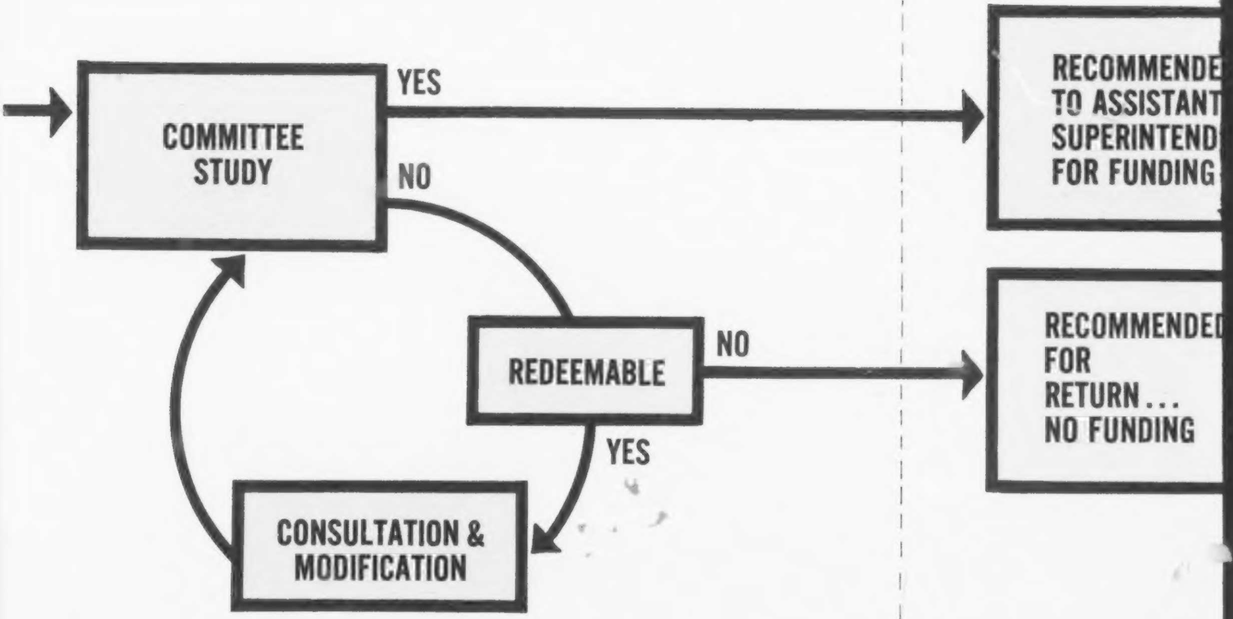


Twelve copies of the proposal are deposited with the office of program administration, in care of the specialist for program evaluation. The proposal is logged in and assigned appropriate control and project classification codes.

From the office of program administration the proposal is then sent to the RCU for preliminary review. It is the purpose of this preliminary review to determine the degree to which the proposal document satisfies the basic requirements with respects to structure and format. No judgment is formed at this stage, except to see that all elements in Part I of these guidelines are present and adequately set forth. If so, one copy is immediately forwarded to each of the members on the Review Committee. If not, the proposal is returned to the initiators for consultation and possible modification, followed by re-submittal.

Review Committee

Office of Program Adı


COMMITTEE STUDY
YES
NO
REDEEMABLE
NO
YES
CONSULTATION & MODIFICATION
RECOMMENDE
TO ASSISTANT
SUPERINTEND
FOR FUNDING
RECOMMENDED
FOR
RETURN . . .
NO FUNDING

It is the function of the Review Committee to judge the merits of the proposed research in terms of the following criteria:

- Priority with respect to other proposals submitted;
- Priorities as spelled out in the State Plan for Vocational-Technical Education;
- Implications for improved education for the citizens of Maryland;
- Appropriateness of design, procedures, and expected outcomes;
- Fiscal feasability;
- Generalizability of results.

Study of the proposal by the Review Committee will result in one of three actions: (1) Immediate recommendation for funding; (2) Return of the proposal to the initiators for consultation and possible modification; (3) Recommendation for permanent return with no funding. If action (2) is taken, re-submittal to the Review Committee will automatically follow. Action (2) may be repeated as often as is necessary. Eventually, either action (1) or action (3) must occur.

When the Review Committee
(1) or action (3) such action w
committee to the office of pro
together with the appropriate
be the task of that office to re
final signature to the Assistan
Vocational-Technical Educati
initiators of the results.

nerits o.

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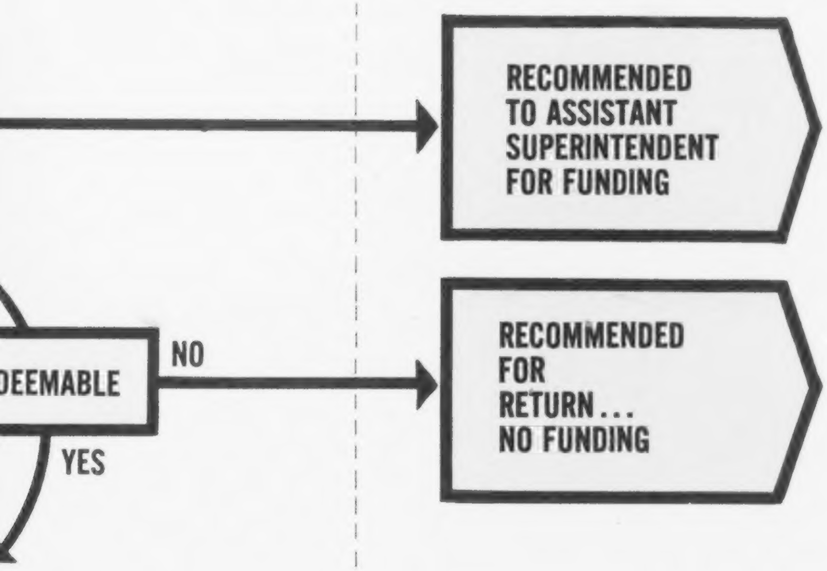
f Maryland;
l outcomes;

lt in one of
g; (2) Return of
le modification;
g. If action
utomatically
ary. Eventually,

Office of Program Administration


RECOMMENDED TO ASSISTANT SUPERINTENDENT FOR FUNDING
DEEMABLE
NO
YES
RECOMMENDED FOR RETURN... NO FUNDING

When the Review Committee has taken either action (1) or action (3) such action will be reported by the committee to the office of program administration together with the appropriate recommendation. It will be the task of that office to render the proposal for final signature to the Assistant State Superintendent in Vocational-Technical Education and then notify the initiators of the results.

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FORM DVE 320A
5-69

MARYLAND STATE DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL–TECHNICAL EDUCATION

__________AGENCY CODE
__________FY
__________CODE (PROGRAM)

PRELIMINARY APPLICATION

For approval of Research and Training; Pilot and Demonstration
Programs Under the Vocational Education Amendments of 1968
and the Maryland State Plan for Vocational–Technical Education

Title:

Agency:

Program Director
and Title:

Transmitted by: ______________________________ ______________
Agency Chief Executive Officer (Signature) Date

Duration of Program:

Funds Requested:

Local Plan Coordinator: ______________________________
(Signature)

Conditions of Approval:

Preliminary Approval: ____________
Date

Recommended for Funding: ____________
Date

____
Chairman, Review Committee (Signature)

____
Assistant State Superintendent in
Vocational-Technical Education

RESEARCH PROGRAM TO DETERMINE THE MANPOWER NEEDS AND STUDENT INTERESTS IN THE AVIATION INDUSTRY

Frederick Community College,

Frederick, Md.

$7,016

Attached are the final results of the Aviation Industry Manpower Survey which began in January of this year and terminated May 21, 1971.

The first mailing was initiated in March and 70 replies were received. The second mailing resulted more favorably with 86 replies.

The results were compiled separately according to form and were then divided by state.

In compiling the totals, full-time and part-time employees were grouped together since some type of special schooling would qualify an individual for hiring.

A capsule summary is provided for each state polled and a more detailed summary is provided for Maryland.

In Maryland, 60 forms were mailed of which 20 were returned. Only 11 forms indicated the status of the labor supply.

The 20 forms returned indicated 572 aircraft located on 20 airports. These 20 airports employ 237 mechanics giving a ratio of almost 2 aircraft to each mechanic.

There are a total of 54 aviation activities operating in the State of Maryland, 20 of these have no mechanics employed or the work is done by the owner/operator. Approximately 12 aviation activities have 2 or more mechanics.

Without fail, all aviation activities operating on a medium to large scale anticipate a need for additional mechanics and pilots by 1974. All smaller activities anticipate no additional need. Only 4 airports reported the labor supply for mechanics as scarce. These were Salisbury, Essex, Aqua-Land, and Ridgely.

SUMMARY

Airlines in the Washington Area - 11 mailed - 11 returned

1. Employ approximately 250 mechanics.
   (approximately 92 terminated employment this year)

2. Anticipated need for mechanics by 1974 - unknown.

3. Airlines all report labor supply adequate to surplus.

Supplemental Carriers - 7 mailed - 7 returned

New Jersey - 145 mailed - 36 returned

1. Currently employed	Salary Range
a. Mechanics - 566	$2.00-$8.00/hr.
b. Avionics - 16	$4.00-$6.00/hr.
c. Pilots - 110	$2.00-$15.00/hr.

2. Anticipated Need by 1974
   - a. Mechanics - 47
   - b. Avionics - 8
   - c. Pilots - 50

3. Labor Supply

   All operators having 3 or more mechanics report labor supply scarce, all others report supply adequate to surplus.

Washington D.C. (Post Office address only)

7 mailed - 3 returned

U.S.A. Mailings

15 mailed - 5 returned

West Virginia - 70 mailed - 12 returned

1. Currently employed	Salary Range
a. Mechanics - 23	$2.50-$7.00/hr.
b. Avionics - 1	$2.00-$7.00/hr.
c. Pilots - 55	$3.00-$7.00/hr.

2. Anticipated Need by 1974
    - a. Mechanics - 10
    - b. Avionics - 1
    - c. Pilots - 15

3. Labor Supply

    All three categories, adequate to surplus.

Virginia - 67 mailed - 23 returned

1. Currently employed	Salary Range
a. Mechanics - 65	$2.00-$8.00/hr.
b. Avionics - 4	$4.00-$7.00/hr.
c. Pilots - 116	$3.00-$10.00/hr.

2. Anticipated Need by 1974
    - a. Mechanics - 41
    - b. Avionics - 4
    - c. Pilots - 30

3. Labor Supply
    - a. Mrchanics - scarce to adequate
    - b. Avionics - unknown
    - c. Pilots - adequate

Delaware - 27 mailed - 9 returned

1. Currently employed	Salary Range
a. Mechanics - 244	$1.50-$7.88/hr.
b. Avionics - 56	None reported
c. Pilots - 30	$3.00-$7.00/hr.

2. Anticipated Need by 1974
    a. Mechanics - 12
    b. Avionics - 11
    c. Pilots - 21

3. Labor Supply - all categories adequate.

SUMMARY

A 38.6 return was obtained with 126 replies out of 409 questionnaires.

This survey was implemented when the aviation industry was in an economic decline and represents a low in the area of need. However, it does justify the need for a program in the State of Maryland for the following reasons:

I. Aviation Mechancis (Licensed):

    a. The conservative figures indicate that a program producing 54 aviation mechanics students by 1974 in the State of Maryland (fixed base operators, civilian personnel managers and commanders of Aviation Operations combined) would be needed. State Employment Security projects a need of 129 by 1974. An average need of 44 per year.

    b. The addition of West Virginia, Virginia, and Delaware (states which do not have programs presently serving their need) would add approximately 25 more aviation mechanics.

    c. If the Federal Aviation Administration (F.A.A.) pass present legislation and enforce such laws, only licensed mechanics would be permitted to be used. Therefore, under the without license category, it would add 10 additional and require the present 13 unlicensed mechanics to obtain F.A.A. ratings.

    d. The present figures of need as established by the Maryland State Employment Security indicates a need of approximately 435 aviation mechanics by 1980. (Data obtained by the Maryland State Department and found in the Division of Vocational-Technical Education Operational Handbook approved for 1971.)

    e. The survey uncovered additional indication of need from the four (4) aviation manufacturing industries located in Maryland

and this data may be found in the attached appendixes. They have indicated that the bulk of present employees (licensed and unlicensed aviation mechanics and technicians) were hired at the end of World War II and are presently due for retirement between 1971 and 1974. An age regression or distribution is presently being developed to indicate the status of this need.

f. Present indications are that due to the reduction in commercial aviation hauling, several mechanics have been released and there exists an adequate supply at this time. Comments were provided that within three (3) years the majority would be relocated and that the industry should recover. Therefore, we are basing all figures on a 1974 data base. This would also be the time span needed to implement a program and produce a graduating class of 30.

II. Avionics Technicians (Major area of need):

a. From all states there were indications of need due to the majority of responses to the column under labor supply which was marked with a (1) as coded for scarce.

b. The conservative figures indicate that a program producing 44 avionics mechanics graduates by 1974 in the State of Maryland (fixed base operators, civilian personnel managers and commanders of aviation operations combined) would be needed.

c. Recent comments made by the individuals on the advisory committee indicate that there has never been a surplus of avionics technicians due to the fact that each year new electronics gear have been developed in this area with no backlog of experienced personnel.

d. A new career was identified for an avionic technician with licenses in frame. This is due to the new advanced electronic gear requiring modification to existing airplanes structures.

III.

The regional concept has been a paramount of importance in the entire planning of the Aviation Mechanics Program.

The regional concept means that students will come from the State of Maryland rather than from a particular educational agency. The employment opportunities are also on a regional basis and are considered on a wider area than the local educational agency.

The program and facilities for an aviation mechanics program has been based on a student enrollment of approximately 25 students per year. Based on this enrollment and a beginning date of 1972, you can expect an annual graduating class of 15 beginning 1974.

Based on the above enrollment and graduation estimates, the survey of employment opportunities supports the need for an aviation mechanics program.

Listed below are three charts projecting the employment opportunities. These charts indicate a low estimate based on the reported data submitted by 28% of the fixed-based operators in the employment zone. A middle range estimating the 72% fixed-based operators who did not respond to the survey as having similar needs as the 28% who responded. The high estimate assumes that the non-responders needs are in the same proportion as the responders.

On the basis of the low-need projection, it would appear that only considering the State of Maryland, there would be ample job opportunities for graduates. The need projections do not account for replacement of personnel, government employment in military installations (which in Maryland shows a need for 44 additional people in 1974), nor the employment of aviation mechanics by private industries such as Fairchild-Hiller.

The high estimate of 55 needed in 1974 in the State of Maryland is still a conservative estimate as compared to the Maryland State Department of Education vocational-educational plan which indicates a need factor of 68 in 1976.

As the educational matrix below indicates, not all the graduates would be pursuing work in aviation mechanics. Some would go into a Bachelor of Science Degree in engineering, others would go immediately into the field of aviation mechanics. Even on the most conservative estimates, potential 15 graduates would not appear to have difficulties in obtaining employment.

LOW NEED

Employment opportunities with Fixed-Based Operators (FBO) based on 28% responding to employment survey done in Spring 1971.

STATE	NO. FBO	NO. REPLYING TO SURVEY	% REPLYING	CURRENT EMPLOYED	PRESENT NEED	ANTICIPATED NEED 1974
Maryland	49	16	32%	28	3	18
Virginia	69	23	33%	42	6	20
W. Virginia	66	12	18%	16	6	5
Delaware	24	8	33%	17	-	29
TOTAL	208	59	28%	103	14	72

MIDDLE ESTIMATE

Employment opportunities with Fixed-Based Operators (FBO) based on 72% of non-responders having same total needs as the 28% responders to the employment survey done in Spring 1971.

STATE	NO. FBO	CURRENT EMPLOYMENT	PRESENT NEED	1974 ANTICIPATED NEED
Maryland	49	56	6	36
Virginia	69	84	12	40
W. Virginia	66	32	10	10
Delaware	24	34	-	58
TOTAL	208	206	28	144

HIGH ESTIMATE

Employment opportunities with Fixed-Based Operators (FBO) on the 72% non-responders having needs in the same proportions as the 28% responders to the employment survey done in Spring 1971.

STATE	NO. FBO	CURRENT EMPLOYMENT	PRESENT NEED	1974 ANTICIPATED NEED
Maryland	49	86	9	55
Virginia	69	126	18	59
W. Virginia	66	87	27	27
Delaware	24	51	-	87
TOTAL	208	350	54	228

CONFIDENTIAL

Figures include FT & PT

RAW DATA
MARYLAND SUMMARY

STATE DEPARTMENT OF EDUCATION
AVIATION EMPLOYMENT SURVEY
FIXED BASE OPERATOR OR AIRPORT MANAGER AND REPAIR STATIONS

CONFIDENTIAL
1. Engine mechanics grouped together.
2. Avionic personnel totals include technicians.

1. PLEASE INDICATE THE NUMBER OF PEOPLE YOU EMPLOY IN EACH CATEGORY. IF YOU ARE NOT CERTAIN, PLEASE ESTIMATE.
2. RETURN THE COMPLETED FORM IN THE ENCLOSED ENVELOPE.

OCCUPATION TITLE PART-TIME - PT FULL-TIME - FT	NUMBER CURRENTLY EMPLOYED		NUMBER HIRED THIS YEAR 1970		NUMBER TERMINATED EMPLOYMENT 1970		ADDITIONAL PERSONNEL PRESENTLY NEEDED		TOTAL NUMBER OF ANTICIPATED WORKERS NEEDED FULL-TIME BY		EDUCATION LEVEL FOR POSITION CODE 1	LABOR SUPPLY CODE 2	APPROXIMATE SALARY RANGE
	FT	PT	FT	PT	FT	PT	FT	PT	SEPT. 71 1 YR.	SEPT. 74 3 YRS.			
A&P MECHANICS	237		59		59		9		36	71	4	2	Low High
AVIATION MECHANICS (WITHOUT LICENSE)													$1.80-$8.00/hr.
AVIONIC SHOP PERSONNEL	112		16		29		10		19	17			$2.75-$4.25/hr.
AIR TRAFFIC CONTROL PERSONNEL (PRIVATE TOWER ONLY)	4				2						4	1	
COMMERCIAL & ATR PILOTS	29		17		8		4		4	25	5	2	$3.00-$15.00/hr.
FROM THE ABOVE PILOT LISTING INDICATE BELOW HOW THEY ARE UTILIZED:	FT	PT	FT	PT	FT	PT	FT	PT	1 YR.	3 YRS.	CODE 1	CODE 2	SALARY
COMMUTER AIRLINE	3		2		2				3	2	5		
CHARTER	5		1				1		2	1	3,5		
AI[illegible]XI	3									3			
I[illegible]RUMENT INSTRUCTOR	10								2	4			
FLIGHT INSTRUCTOR	25		5		2				3	3			
GROUND INSTRUCTION	12		2						1	4			
GROUND INSTRUCTION, (NON PILOT)													
OTHER (SPECIFY)													

CODE 1:
1. NONE ESTABLISHED
2. HIGH SCHOOL NOT REQUIRED
3. HIGH SCHOOL GRADUATE
4. COMPLETION POST SECONDARY - VOCATIONAL OR 1 YEAR OF COLLEGE
5. SOME COLLEGE - 2 YR.
6. COLLEGE DEGREE - 4 YR.

CODE 2:
1. SCARCE
2. ADEQUATE
3. SURPLUS

PLEASE CHECK THE APPROPRIATE ANSWER:

1. WHICH OF THE FOLLOWING AREAS IN BUSINESS OF FLIGHT INSTRUCTION ARE YOU ENGAGED?

___ A. PRIVATE LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___

___ B. COMMERCIAL LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___

___ C. INSTRUMENT LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___

___ D. MULTI-ENGINE LICENSE F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___

PLEASE PROVIDE THE FOLLOWING:

NO. OF AIRPLANES YOU OPERATE & NO. BASED AT FACILITY
OPERATE - OPE BASED - BSD

FIXED WING AIRCRAFT				ROTARY WING AIRCRAFT	
SINGLE ENGINE		MULTI ENGINE			
OPE	BSD	OPE	BSD	OPE	BSD
66	468	12	26		

ROVIDE ANY COMMENT YOU FEEL MAY ASSIST US IN OUR ENDEAVOR:

CONFIDENTIAL

LAND 11 mailed
4 replied
36.4% return

CONFIDENTIAL

STATE DEPARTMENT OF EDUCATION
AVIATION EMPLOYMENT SURVEY
CIVILIAN PERSONNEL MANAGER AND COMMANDERS OF AVIATION OPERATIONS

1. PLEASE INDICATE THE NUMBER OF PEOPLE YOU EMPLOY IN EACH CATEGORY. IF YOU ARE NOT CERTAIN, PLEASE ESTIMATE.
2. RETURN THE COMPLETED FORM IN THE ENCLOSED ENVELOPE.

OCCUPATION TITLE PART-TIME PT FULL-TIME FT	NUMBER CURRENTLY EMPLOYED		NUMBER HIRED THIS YEAR 1970 FT		NUMBER TERMINATED EMPLOYMENT 1970 FT		ADDITIONAL PERSONNEL PRESENTLY NEEDED FT		TOTAL NUMBER OF ANTICIPATED WORKERS NEEDED FULL-TIME BY		EDUCATION LEVEL FOR POSITION		LABOR SUPPLY		GS GRADE OR APPROXIMATELY
	FT	PT	FT	~~PT~~	FT	~~PT~~	FT	~~PT~~	SEPT. 71	SEPT. 74	CODE 1		CODE 2		SALARY RANGE
COMMERCIAL PILOTS (FIXED WING AND ROTARY WING)															
1. TEST AIRCRAFT															
2. TRANSPORT VIP'S															
3. GENERAL FLIGHT															
4. OTHER (SPECIFY)															
PILOTS (ROTARY WING ONLY)															
AVIONICS (ELECTRONIC EQUIPMENT INSTALLATION AND MAINTENANCE)															
1. MECHANICS 100	275	1	10	27	24	66	9	24	13 35	30 82	4		2		$2.75-$3.43/hr.
2. TECHNICIANS 2	5		1	1	1	3 8			0	0	4		2		$3.15-$4.40/hr.
3. ENGINEERS															
AIRCRAFT AND POWER PLANT PERSONNEL (SERVICE AND REPAIR MECHANICS)															
1. JET ENGINE MECHANICS 47	129		2	5	1	3			4 11	16 44	4		2		
2. PISTON ENGINE MECHANICS 33	90		6	16	7	19			3 8	3 8	4		2		
3. LICOPTER MECHANICS 5	13		3	8	1	3			1 3		4		2		
4. PROPELLER MECHANICS 11	30				2	5				2 5	4		2		
5. HYDRAULIC SYSTEMS MECHANICS 10	27		1	2	2	5			1 3	1 3	4		2		
6. INSTRUMENT AND CONTROL SYSTEMS MECHANICS 9	24				3	8	1	3		3 8	1	1			
7. OXYGEN SYSTEMS MECHANICS															
FLIGHT LINE MECHANICS 14	38		9	24	9	24			6 16	2 5	3		2		
SHEET METAL MECHANICS 10	27		4	11	10	27	1	3	2 5	8 22	4		2		$1.80-$4.40/hr.
GENERAL MECHANICS 12	33		3	8	5	13			2 5		4		2		$1.80-$5.00/hr.
OTHERS (SPECIFY) A. Aircraft Elect. 25 B. Tech. Inspectors 2 C. Elect. Equip. Repair 9	68 5 24		3	8	2	5			2 5	6 16 3 8	3 3		2 2		
AIR TRAFFIC CONTROL PERSONNEL (NOT EMPLOYED BY FAA) 4	11				2	5					4		1		

9

CODE 1: 1. NONE ESTABLISHED
2. HIGH SCHOOL NOT REQUIRED
3. HIGH SCHOOL GRADUATE
4. COMPLETION POST SECONDARY VOCATIONAL OR 1 YEAR OF COLLEGE
5. SOME COLLEGE - 2 YEARS
6. COLLEGE DEGREE - 4 YEARS

CODE 2: 1. SCARCE
2. ADEQUATE
3. SURPLUS

ROVIDE ANY COMMENT YOU FEEL MAY ASSIST US IN OUR ENDEAVOR:

THE MINIMUM FIGURE (1st FIGURE) REPRESENTS THE RAW DATA AND THE MAXIMUM FIGURE 2nd FIGURE) IS THE INFLATED STATISTICS BASED UPON THE 36.4% RETURN.

7 CONFIDENTIAL
MARYLAND 49 mailed
16 replied
32.6% return
87.7% represents large operators (no one man operation)

RAW DATA

STATE DEPARTMENT OF EDUCATION
AVIATION EMPLOYMENT SURVEY
FIXED BASE OPERATOR OR AIRPORT MANAGER AND REPAIR STATIONS

CONFIDENTIAL

1. PLEASE INDICATE THE NUMBER OF PEOPLE YOU EMPLOY IN EACH CATEGORY. IF YOU ARE NOT CERTAIN, PLEASE ESTIMATE.
2. RETURN THE COMPLETED FORM IN THE ENCLOSED ENVELOPE.

OCCUPATION TITLE PART-TIME - PT FULL-TIME - FT	NUMBER CURRENTLY EMPLOYED		NUMBER HIRED THIS YEAR 1970		NUMBER TERMINATED EMPLOYMENT 1970		ADDITIONAL PERSONNEL PRESENTLY NEEDED		TOTAL NUMBER OF ANTICIPATED WORKERS NEEDED FULL-TIME BY		EDUCATION LEVEL FOR POSITION CODE 1	LABOR SUPPLY CODE 2	APPROXIMATE SALARY RANGE
	FT	PT	FT	PT	FT	PT	FT	PT	SEPT. 71 1 YR.	SEPT. 74 3 YRS.			
A&P MECHANICS 28 32	85	8 9 24	11 12 33	6 7 18	4 12	4 12	3 9	1 3	8 9 24	18 20 56	5	2	$2-$8/hr.
AVIATION MECHANICS (WITHOUT LICENSE) 12	3 37	4 12	9 10 28	2 6	6 7 18	2 6	1 3	2 6	7 8 22	9 10 28	3	2	$2.15-$7/hr.
AVIONIC SHOP PERSONNEL 8 9	24	1 3	2 6	2 6	4 12	00	0 0	1 3	6 18	9 10 28	4	1	$2.75-$7/hr.
AIR TRAFFIC CONTROL PERSONNEL (PRIVATE TOWER ONLY)													
COMMERCIAL & ATR PILOTS 19 21	59	10 11 31	10 11 31	7 8 22	7 8 22	1 3	2 6	2 6	4 12	25 28 78	5	2	$3-$15/hr.
FROM THE ABOVE PILOT LISTING INDICATE BELOW HOW THEY ARE UTILIZED:	FT	PT	FT	PT	FT	PT	FT	PT	1 YR.	3 YRS.	CODE 1	CODE 2	SALARY
COMMUTER AIRLINE	3 9		2 6		2 5				3 9	2 6	5		$3-$6/hr.
CHARTER	4 12	1 3		1 3			1 3		2 6	1 3	3,5	2	$9-$15/hr.
AIR TAXI	3 9									3 9	5	3,2	$3-$10/hr.
INSTRUMENT INSTRUCTOR 8 9	24	2 6							2 6	4 12	3,5	2	$3-$10/hr.
FLIGHT INSTRUCTOR 15 17	47	10	4	1	1	1			3	3	3,5	2	$3-$10/hr.
GROUND INSTRUCTION	7	5	1	1					1	4	3,5	2	$3-$7/hr.
GROUND INSTRUCTION, (NON PILOT)													
OTHER (SPECIFY)													

CODE 1:
1. NONE ESTABLISHED
2. HIGH SCHOOL NOT REQUIRED
3. HIGH SCHOOL GRADUATE
4. COMPLETION POST SECONDARY - VOCATIONAL OR 1 YEAR OF COLLEGE
5. SOME COLLEGE - 2 YR.
6. COLLEGE DEGREE - 4 YR.

CODE 2:
1. SCARCE
2. ADEQUATE
3. SURPLUS

PLEASE CHECK THE APPROPRIATE ANSWER:
1. WHICH OF THE FOLLOWING AREAS IN BUSINESS OF FLIGHT INSTRUCTION ARE YOU ENGAGED?
___ A. PRIVATE LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___
___ B. COMMERCIAL LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___
___ C. INSTRUMENT LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___
___ D. MULTI-ENGINE LICENSE F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___

PLEASE PROVIDE THE FOLLOWING:

NO. OF AIRPLANES YOU OPERATE & NO. BASED AT FACILITY
OPERATE - OPE BASED - BSD

FIXED WING AIRCRAFT				ROTARY WING AIRCRAFT	
SINGLE ENGINE		MULTI ENGINE			
OPE	BSD	OPE	BSD	OPE	BSD
66 75	458 532	12 13	26 29		

PROVIDE ANY COMMENT YOU FEEL MAY ASSIST US IN OUR ENDEAVOR:
THE MINIMUM FIGURE (1ST FIGURE) REPRESENTS FIXED BASED OPERATORS WITH MORE THAN ONE FULL-TIME EMPLOYEE. APPROXIMATELY 14 OF THE 16 REPLIES OR 87.7% OF THE RAW DATA WERE OBTAINED FROM THIS GROUP.
THE MAXIMUM FIGURE REPRESENTS THE INFLATED FIGURE BASED UPON THE 32.6% WHO RETURNED THE QUESTIONNAIRE.

civilian forms mailed - none returned

CONFIDENTIAL

WEST VIRGINIA 66 mailed
12 replied

RAW DATA

STATE DEPARTMENT OF EDUCATION
AVIATION EMPLOYMENT SURVEY
FIXED BASE OPERATOR OR AIRPORT MANAGER AND REPAIR STATIONS

CONFIDENTIAL

1. PLEASE INDICATE THE NUMBER OF PEOPLE YOU EMPLOY IN EACH CATEGORY. IF YOU ARE NOT CERTAIN, PLEASE ESTIMATE.
2. RETURN THE COMPLETED FORM IN THE ENCLOSED ENVELOPE.

OCCUPATION TITLE PART-TIME - PT FULL-TIME - FT	NUMBER CURRENTLY EMPLOYED		NUMBER HIRED THIS YEAR 1970		NUMBER TERMINATED EMPLOYMENT 1970		ADDITIONAL PERSONNEL PRESENTLY NEEDED		TOTAL NUMBER OF ANTICIPATED WORKERS NEEDED FULL-TIME BY		EDUCATION LEVEL FOR POSITION CODE 1	LABOR SUPPLY CODE 2	APPROXIMATE SALARY RANGE
	FT	PT	FT	PT	FT	PT	FT	PT	SEPT. 71 1 YR.	SEPT. 74 3 YRS.			
A&P MECHANICS	16	3	4		3		5		5	5	3	2	$2.50-$7/hr.
AVIATION MECHANICS (WITHOUT LICENSE)	3	1	1		1		1		3	8	3	2	$2-$7/hr.
AVIONIC SHOP PERSONNEL	1		1		1		1		2		3,4	1	$3-$5/hr.
AIR TRAFFIC CONTROL PERSONNEL (PRIVATE TOWER ONLY)	6	3									3	3	
COMMERCIAL & ATR PILOTS	18	14	5	1	3	1		1	2	6	1,3,5,	3	$3-$7/hr.
FROM THE ABOVE PILOT LISTING INDICATE BELOW HOW THEY ARE UTILIZED:	FT	PT	FT	PT	FT	PT	FT	PT	1 YR.	3 YRS.	CODE 1	CODE 2	SALARY
COMMUTER AIRLINE	3		1		1						4	3	$3/hr.
CHARTER	6	2	1		1						4	3	$3/hr.
AIR TAXI	15	3	4	1	2	1		1	2	12	3	2,3	$3-$6/hr.
INSTRUMENT INSTRUCTOR	5	2	1	1	1						3,4,5	2,3	$3-$5/hr.
FLIGHT INSTRUCTOR	9	7	1	1	1	1			1	2	3	2,3	$3-$7/hr.
GROUND INSTRUCTION	3	1	1		1				1		3,5	2	$3-$5/hr.
GROUND INSTRUCTION, (NON PILOT)													
OTHER (SPECIFY) Re-fueling	11		18		15						2	2	$2-$3/hr.

CODE 1:
1. NONE ESTABLISHED
2. HIGH SCHOOL NOT REQUIRED
3. HIGH SCHOOL GRADUATE
4. COMPLETION POST SECONDARY - VOCATIONAL OR 1 YEAR OF COLLEGE
5. SOME COLLEGE - 2 YR.
6. COLLEGE DEGREE - 4 YR.

CODE 2:
1. SCARCE
2. ADEQUATE
3. SURPLUS

99

PLEASE CHECK THE APPROPRIATE ANSWER:

1. WHICH OF THE FOLLOWING AREAS IN BUSINESS OF FLIGHT INSTRUCTION ARE YOU ENGAGED?

___ A. PRIVATE LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___
___ B. COMMERCIAL LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___
___ C. INSTRUMENT LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___
___ D. MULTI-ENGINE LICENSE F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___

PLEASE PROVIDE THE FOLLOWING:

NO. OF AIRPLANES YOU OPERATE & NO. BASED AT FACILITY

OPERATE - OPE BASED - BSD

FIXED WING AIRCRAFT				ROTARY WING AIRCRAFT	
SINGLE ENGINE		MULTI ENGINE			
OPE	BSD	OPE	BSD	OPE	BSD
31	238	10	114	3	17

PROVIDE ANY COMMENT YOU FEEL MAY ASSIST US IN OUR ENDEAVOR:

CONFIDENTIAL
VIRGINIA 69 mailed
23 replied
33.2% reply

STATE DEPARTMENT OF EDUCATION
AVIATION EMPLOYMENT SURVEY
FIXED BASE OPERATOR OR AIRPORT MANAGER AND REPAIR STATIONS

CONFIDENTIAL

1. PLEASE INDICATE THE NUMBER OF PEOPLE YOU EMPLOY IN EACH CATEGORY. IF YOU ARE NOT CERTAIN, PLEASE ESTIMATE.
2. RETURN THE COMPLETED FORM IN THE ENCLOSED ENVELOPE.

OCCUPATION TITLE PART-TIME - PT FULL-TIME - FT	NUMBER CURRENTLY EMPLOYED		NUMBER HIRED THIS YEAR 1970		NUMBER TERMINATED EMPLOYMENT 1970		ADDITIONAL PERSONNEL PRESENTLY NEEDED		TOTAL NUMBER OF ANTICIPATED WORKERS NEEDED FULL-TIME BY		EDUCATION LEVEL FOR POSITION CODE 1	LABOR SUPPLY CODE 2	APPROXIMATE SALARY RANGE
	FT	PT	FT	PT	FT	PT	FT	PT	SEPT. 71 1 YR.	SEPT. 74 3 YRS.			
A&P MECHANICS 42	127	8 24	9 27	1 3	6 18		6 18		7 21	20 60	2,3,4	1,2	$2-$8/hr.
AVIATION MECHANICS (WITHOUT LICENSE) 13	39	2 6	1 3					1 3	3 9	11 33	2,3,4	2,3	$3-$7/hr.
AVIONIC SHOP PERSONNEL	4 6	12					2 6		1 3	3 9	5	2	$4-$7/hr.
AIR TRAFFIC CONTROL PERSONNEL (PRIVATE TOWER ONLY)										3 9	5	2	$5/hr.
COMMERCIAL & ATR PILOTS 47	130	20 60	12 36	7 21	7 21	4 12	1 3		2 6	10 30	3	2	$4-$10/hr.
FROM THE ABOVE PILOT LISTING INDICATE BELOW HOW THEY ARE UTILIZED: 12	FT 36	PT 12 36	FT 26	PT 4 12	FT	PT	FT	PT	1 YR. 2 6	3 YRS. 5 15	CODE 1	CODE 2	SALARY
COMMUTER AIRLINE 4	12												$10/hr.
CHARTER 14	42	5 15	1 3	1 3					1 3	4 12	4	1,3	$3-$8/hr.
AIR TAXI 17	41	6 18	4 12	4 12	1 3	2 6	1 3		1 3	5 15	4	1,3	$3-$4/hr.
INSTRUMENT INSTRUCTOR 12	36	5 15	1 3	3 9	1 3	2 6	1 3			2 6	3,4	1	$4-$10/hr.
FLIGHT INSTRUCTOR 15	45	9 27	1 3	3 9	2 6	2 6	2 6		1 3	4 12	3,4	1	$4/hr.
GROUND INSTRUCTION 4	12	1 3	1 3	1 3	1 3	1 3	1 3			2 6	3	1	$4/hr.-$6/hr.
GROUND INSTRUCTION, (NON PILOT)													
OTHER (SPECIFY)													

CODE 1:
1. NONE ESTABLISHED
2. HIGH SCHOOL NOT REQUIRED
3. HIGH SCHOOL GRADUATE
4. COMPLETION POST SECONDARY - VOCATIONAL OR 1 YEAR OF COLLEGE
5. SOME COLLEGE - 2 YR.
6. COLLEGE DEGREE - 4 YR.

CODE 2:
1. SCARCE
2. ADEQUATE
3. SURPLUS

100

PLEASE CHECK THE APPROPRIATE ANSWER:

1. WHICH OF THE FOLLOWING AREAS IN BUSINESS OF FLIGHT INSTRUCTION ARE YOU ENGAGED?

___ A. PRIVATE LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___

___ B. COMMERCIAL LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___

___ C. INSTRUMENT LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___

___ D. MULTI-ENGINE LICENSE F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___

PLEASE PROVIDE THE FOLLOWING:

NO. OF AIRPLANES YOU OPERATE & NO. BASED AT FACILITY
OPERATE - OPE BASED - BSD

FIXED WING AIRCRAFT				ROTARY WING AIRCRAFT	
SINGLE ENGINE		MULTI ENGINE			
OPE	BSD	OPE	BSD	OPE	BSD
93	344	16	49	14	9

PROVIDE ANY COMMENT YOU FEEL MAY ASSIST US IN OUR ENDEAVOR:

THE MINIMUM FIGURE (1ST FIGURE) REPRESENTS THE RAW DATA AND THE MAXIMUM FIGURE IS INFLATED BASED UPON THE 33.2% RETURN.

CONFIDENTIAL

RAW DATA

CONFIDENTIAL

VIRGINIA 3 mailed
1 replied

STATE DEPARTMENT OF EDUCATION
AVIATION EMPLOYMENT SURVEY
CIVILIAN PERSONNEL MANAGER AND COMMANDERS OF AVIATION OPERATIONS

1. PLEASE INDICATE THE NUMBER OF PEOPLE YOU EMPLOY IN EACH CATEGORY. IF YOU ARE NOT CERTAIN, PLEASE ESTIMATE.
2. RETURN THE COMPLETED FORM IN THE ENCLOSED ENVELOPE.

OCCUPATION TITLE PART-TIME PT FULL-TIME FT	NUMBER CURRENTLY EMPLOYED		NUMBER HIRED THIS YEAR 1970		NUMBER TERMINATED EMPLOYMENT 1970		ADDITIONAL PERSONNEL PRESENTLY NEEDED		TOTAL NUMBER OF ANTICIPATED WORKERS NEEDED FULL-TIME BY		EDUCATION LEVEL FOR POSITION		LABOR SUPPLY		GS GRADE OR APPROXIMATELY
	FT	PT	FT	PT	FT	PT	FT	PT	SEPT. 71	SEPT. 74	CODE 1		CODE 2		SALARY RANGE
COMMERCIAL PILOTS (FIXED WING AND ROTARY WING)	1	3		3			1		1	2	4		1		FT - $9/hr. PT - $6/hr.
1. TEST AIRCRAFT															
2. TRANSPORT VIP'S															
3. GENERAL FLIGHT		3													
4. OTHER (SPECIFY) Demo	1														
PILOTS (ROTARY WING ONLY)															
AVIONICS (ELECTRONIC EQUIPMENT INSTALLATION AND MAINTENANCE)															
1. MECHANICS															
2. TECHNICIANS															
3. ENGINEERS															
AIRCRAFT AND POWER PLANT PERSONNEL (SERVICE AND REPAIR MECHANICS)															
1. JET ENGINE MECHANICS															
2. PISTON ENGINE MECHANICS									2						
3. HELICOPTER MECHANICS															
4. PROPELLER MECHANICS															
5. HYDRAULIC SYSTEMS MECHANICS									2.						
6. INSTRUMENT AND CONTROL SYSTEMS MECHANICS									2						
7. OXYGEN SYSTEMS MECHANICS									1						
FLIGHT LINE MECHANICS									2						
SHEET METAL MECHANICS									2						
GENERAL MECHANICS									2						
OTHERS (SPECIFY) A. B. C.															
AIR TRAFFIC CONTROL PERSONNEL (NOT EMPLOYED BY FAA)															

101

CODE 1: 1. NONE ESTABLISHED
2. HIGH SCHOOL NOT REQUIRED
3. HIGH SCHOOL GRADUATE
4. COMPLETION POST SECONDARY VOCATIONAL OR 1 YEAR OF COLLEGE
5. SOME COLLEGE - 2 YEARS
6. COLLEGE DEGREE - 4 YEARS

CODE 2: 1. SCARCE
2. ADEQUATE
3. SURPLUS

PROVIDE ANY COMMENT YOU FEEL MAY ASSIST US IN OUR ENDEAVOR:

CONFIDENTIAL
DELAWARE 24 mailed
8 replied

CONFIDENTIAL

STATE DEPARTMENT OF EDUCATION
AVIATION EMPLOYMENT SURVEY
FIXED BASE OPERATOR OR AIRPORT MANAGER AND REPAIR STATIONS

1. PLEASE INDICATE THE NUMBER OF PEOPLE YOU EMPLOY IN EACH CATEGORY. IF YOU ARE NOT CERTAIN, PLEASE ESTIMATE.
2. RETURN THE COMPLETED FORM IN THE ENCLOSED ENVELOPE.

OCCUPATION TITLE PART-TIME - PT FULL-TIME - FT	NUMBER CURRENTLY EMPLOYED		NUMBER HIRED THIS YEAR 1970		NUMBER TERMINATED EMPLOYMENT 1970		ADDITIONAL PERSONNEL PRESENTLY NEEDED		TOTAL NUMBER OF ANTICIPATED WORKERS NEEDED FULL-TIME BY		EDUCATION LEVEL FOR POSITION CODE 1	LABOR SUPPLY CODE 2	APPROXIMATE SALARY RANGE
	FT	PT	FT	PT	FT	PT	FT	PT	SEPT. 71 1 YR.	SEPT. 74 3 YRS.			
A&P MECHANICS	17		6		2				17	29	3	2	$4-$7/hr.
AVIATION MECHANICS (WITHOUT LICENSE)	1	5	1	1		1	1				3	2	$1.50/hr.
AVIONIC SHOP PERSONNEL	5	1	3	1	2			1	7	10	3.4	2	
AIR TRAFFIC CONTROL PERSONNEL (PRIVATE TOWER ONLY)													
COMMERCIAL & ATR PILOTS	13	5	4	1	3				8	12	3	2	$3/hr.
FROM THE ABOVE PILOT LISTING INDICATE BELOW HOW THEY ARE UTILIZED:	FT	PT	FT	PT	FT	PT	FT	PT	1 YR.	3 YRS.	CODE 1	CODE 2	SALARY
COMMUTER AIRLINE													
CHARTER	3	2		2		1			3	5	3,4	2	$7/hr.
AIR TAXI													
INSTRUMENT INSTRUCTOR	5		2			1			5	7	3,4	2	$
FLIGHT INSTRUCTOR	5	5	3		1						3,4	2	$6-$7/hr.
GROUND INSTRUCTION	3	1	2								3,4	2	
GROUND INSTRUCTION, (NON PILOT)											3.4		
OTHER (SPECIFY)													

CODE 1:
1. NONE ESTABLISHED
2. HIGH SCHOOL NOT REQUIRED
3. HIGH SCHOOL GRADUATE
4. COMPLETION POST SECONDARY - VOCATIONAL OR 1 YEAR OF COLLEGE
5. SOME COLLEGE - 2 YR.
6. COLLEGE DEGREE - 4 YR.

CODE 2:
1. SCARCE
2. ADEQUATE
3. SURPLUS

PLEASE CHECK THE APPROPRIATE ANSWER:
WHICH OF THE FOLLOWING AREAS IN BUSINESS OF FLIGHT INSTRUCTION ARE YOU ENGAGED?

___ A. PRIVATE LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___
___ B. COMMERCIAL LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___
___ C. INSTRUMENT LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___
___ D. MULTI-ENGINE LICENSE F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___

PLEASE PROVIDE THE FOLLOWING:

NO. OF AIRPLANES YOU OPERATE & NO. BASED AT FACILITY
OPERATE - OPE BASED - BSD

FIXED WING AIRCRAFT				ROTARY WING AIRCRAFT	
SINGLE ENGINE		MULTI ENGINE			
OPE	BSD	OPE	BSD	OPE	BSD
52	113	4	13		

PROVIDE ANY COMMENT YOU FEEL MAY ASSIST US IN OUR ENDEAVOR:

CONFIDENTIAL
DELAWARE 3 mailed
1 replied

CONFIDENTIAL

STATE DEPARTMENT OF EDUCATION
AVIATION EMPLOYMENT SURVEY
CIVILIAN PERSONNEL MANAGER AND COMMANDERS OF AVIATION OPERATIONS

1. PLEASE INDICATE THE NUMBER OF PEOPLE YOU EMPLOY IN EACH CATEGORY. IF YOU ARE NOT CERTAIN, PLEASE ESTIMATE.
2. RETURN THE COMPLETED FORM IN THE ENCLOSED ENVELOPE.

OCCUPATION TITLE PART-TIME PT FULL-TIME FT	NUMBER CURRENTLY EMPLOYED		NUMBER HIRED THIS YEAR 1970		NUMBER TERMINATED EMPLOYMENT 1970		ADDITIONAL PERSONNEL PRESENTLY NEEDED		TOTAL NUMBER OF ANTICIPATED WORKERS NEEDED FULL-TIME BY		EDUCATION LEVEL FOR POSITION	LABOR SUPPLY	GS GRADE OR APPROXIMATELY
	FT	PT	FT	PT	FT	PT	FT	PT	SEPT. 71	SEPT. 74	CODE 1	CODE 2	SALARY RANGE
COMMERCIAL PILOTS (FIXED WING AND ROTARY WING)													
1. TEST AIRCRAFT													
2. TRANSPORT VIP'S													
3. GENERAL FLIGHT	6		1								1		GS-13
4. OTHER (SPECIFY)													
PILOTS (ROTARY WING ONLY)													
AVIONICS (ELECTRONIC EQUIPMENT INSTALLATION AND MAINTENANCE)													
1. MECHANICS	50		3		3								
2. TECHNICIANS													$4.04-$8.93/hr.
3. ENGINEERS													
AIRCRAFT AND POWER PLANT PERSONNEL (SERVICE AND REPAIR MECHANICS)													
1. JET ENGINE MECHANICS	45										1		$4.04-$7.88/hr.
2. PISTON ENGINE MECHANICS											1		
3. HELICOPTER MECHANICS											1		
4. PROPELLER MECHANICS					9						1		
5. HYDRAULIC SYSTEMS MECHANICS	9										1		$4.04-$6.37/hr.
6. INSTRUMENT AND CONTROL SYSTEMS MECHANICS	10										1		$4.04-$4.79/hr.
OXYGEN SYSTEMS MECHANICS													
FLIGHT LINE MECHANICS	78		5		3						1		$4.04-$4.79/hr.
SHEET METAL MECHANICS	37				5						1		$4.04-$7.46/hr.
GENERAL MECHANICS	44										1		$4.04-$4.79/hr.
OTHERS (SPECIFY) a. b. c.													
AIR TRAFFIC CONTROL PERSONNEL (NOT EMPLOYED BY FAA)											1		

CODE 1:
1. NONE ESTABLISHED
2. HIGH SCHOOL NOT REQUIRED
3. HIGH SCHOOL GRADUATE
4. COMPLETION POST SECONDARY VOCATIONAL OR 1 YEAR OF COLLEGE
5. SOME COLLEGE - 2 YEARS
6. COLLEGE DEGREE - 4 YEARS

CODE 2:
1. SCARCE
2. ADEQUATE
3. SURPLUS

PROVIDE ANY COMMENT YOU FEEL MAY ASSIST US IN OUR ENDEAVOR:

CONFIDENTIAL

ASHINGTON, D.C. 3 mailed
2 replied

CONFIDENTIAL

STATE DEPARTMENT OF EDUCATION
AVIATION EMPLOYMENT SURVEY
CIVILIAN PERSONNEL MANAGER AND COMMANDERS OF AVIATION OPERATIONS

1. PLEASE INDICATE THE NUMBER OF PEOPLE YOU EMPLOY IN EACH CATEGORY. IF YOU ARE NOT CERTAIN, PLEASE ESTIMATE.
2. RETURN THE COMPLETED FORM IN THE ENCLOSED ENVELOPE.

OCCUPATION TITLE PART-TIME PT FULL-TIME FT	NUMBER CURRENTLY EMPLOYED		NUMBER HIRED THIS YEAR 1970		NUMBER TERMINATED EMPLOYMENT 1970		ADDITIONAL PERSONNEL PRESENTLY NEEDED		TOTAL NUMBER OF ANTICIPATED WORKERS NEEDED FULL-TIME BY		EDUCATION LEVEL FOR POSITION	LABOR SUPPLY	GS GRADE OR APPROXIMATELY
	FT	PT	FT	PT	FT	PT	FT	PT	SEPT. 71	SEPT. 74	CODE 1	CODE 2	SALARY RANGE
COMMERCIAL PILOTS (FIXED WING AND ROTARY WING)	610				100*						6	3	$3/hr.
1. TEST AIRCRAFT													
2. TRANSPORT VIP'S													
3. GENERAL FLIGHT													
4. OTHER (SPECIFY)													
PILOTS (ROTARY WING ONLY)													
AVIONICS (ELECTRONIC EQUIPMENT INSTALLATION AND MAINTENANCE)													
1. MECHANICS	19												$6/hr.
2. TECHNICIANS	3										1	3	$4.07-$4.47/hr.
3. ENGINEERS													
AIRCRAFT AND POWER PLANT PERSONNEL (SERVICE AND REPAIR MECHANICS)													
1. JET ENGINE MECHANICS	3										1	3	$4.07-$4.47/hr.
2. PISTON ENGINE MECHANICS	8										1	5	$4.07-$4.47/hr.
3. HELICOPTER MECHANICS													
4. PROPELLER MECHANICS													
5. HYDRAULIC SYSTEMS MECHANICS													
6. INSTRUMENT AND CONTROL SYSTEMS MECHANICS													
OXYGEN SYSTEMS MECHANICS													
FLIGHT LINE MECHANICS	141												
SHEET METAL MECHANICS													
GENERAL MECHANICS	45												$6/hr.
OTHERS (SPECIFY) a. b. c.													
AIR TRAFFIC CONTROL PERSONNEL (NOT EMPLOYED BY FAA)													

CODE 1: 1. NONE ESTABLISHED
2. HIGH SCHOOL NOT REQUIRED
3. HIGH SCHOOL GRADUATE
4. COMPLETION POST SECONDARY VOCATIONAL OR 1 YEAR OF COLLEGE
5. SOME COLLEGE - 2 YEARS
6. COLLEGE DEGREE - 4 YEARS

CODE 2: 1. SCARCE
2. ADEQUATE
3. SURPLUS

PROVIDE ANY COMMENT YOU FEEL MAY ASSIST US IN OUR ENDEAVOR:

*Layoff

CONFIDENTIAL
WASHINGTON, D.C. 6 mailed
1 replied

STATE DEPARTMENT OF EDUCATION
AVIATION EMPLOYMENT SURVEY
FIXED BASE OPERATOR OR AIRPORT MANAGER AND REPAIR STATIONS

CONFIDENTIAL

1. PLEASE INDICATE THE NUMBER OF PEOPLE YOU EMPLOY IN EACH CATEGORY. IF YOU ARE NOT CERTAIN, PLEASE ESTIMATE.
2. RETURN THE COMPLETED FORM IN THE ENCLOSED ENVELOPE.

OCCUPATION TITLE PART-TIME - PT FULL-TIME - FT.	NUMBER CURRENTLY EMPLOYED		NUMBER HIRED THIS YEAR 1970		NUMBER TERMINATED EMPLOYMENT 1970		ADDITIONAL PERSONNEL PRESENTLY NEEDED		TOTAL NUMBER OF ANTICIPATED WORKERS NEEDED FULL-TIME BY		EDUCATION LEVEL FOR POSITION CODE 1	LABOR SUPPLY CODE 2	APPROXIMATE SALARY RANGE
	FT	PT	FT	PT	FT	PT	FT	PT	SEPT. 71 1 YR.	SEPT. 74 3 YRS.			
A&P MECHANICS	11										1	3	$4.07-$4.47/hr.
AVIATION MECHANICS (WITHOUT LICENSE)													
AVIONIC SHOP PERSONNEL	3										1	3	$4.07-$4.47/hr.
AIR TRAFFIC CONTROL PERSONNEL (PRIVATE TOWER ONLY)													
COMMERCIAL & ATR PILOTS													
FROM THE ABOVE PILOT LISTING - INDICATE BELOW HOW THEY ARE UTILIZED:	FT	PT	FT	PT	FT	PT	FT	PT	1 YR.	3 YRS.	CODE 1	CODE 2	SALARY
COMMUTER AIRLINE													
CHARTER													
AIR TAXI													
INSTRUMENT INSTRUCTOR													
FLIGHT INSTRUCTOR													
GROUND INSTRUCTION													
GROUND INSTRUCTION, (NON PILOT)													
OTHER (SPECIFY)													

CODE 1:
1. NONE ESTABLISHED
2. HIGH SCHOOL NOT REQUIRED
3. HIGH SCHOOL GRADUATE
4. COMPLETION POST SECONDARY - VOCATIONAL OR 1 YEAR OF COLLEGE
5. SOME COLLEGE - 2 YR.
6. COLLEGE DEGREE - 4 YR.

CODE 2:
1. SCARCE
2. ADEQUATE
3. SURPLUS

CHECK THE APPROPRIATE ANSWER:

1. WHICH OF THE FOLLOWING AREAS IN BUSINESS OF FLIGHT INSTRUCTION ARE YOU ENGAGED?

___ A. PRIVATE LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___
___ B. COMMERCIAL LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___
___ C. INSTRUMENT LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___
___ D. MULTI-ENGINE LICENSE F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___

PLEASE PROVIDE THE FOLLOWING:

NO. OF AIRPLANES YOU OPERATE & NO. BASED AT FACILITY

OPERATE - OPE BASED - BSD

FIXED WING AIRCRAFT				ROTARY WING AIRCRAFT	
SINGLE ENGINE		MULTI ENGINE			
OPE	BSD	OPE	BSD	OPE	BSD

PROVIDE ANY COMMENT YOU FEEL MAY ASSIST US IN OUR ENDEAVOR:

CONFIDENTIAL
NEW JERSEY 5 mailed
2 replied

CONFIDENTIAL

STATE DEPARTMENT OF EDUCATION
AVIATION EMPLOYMENT SURVEY
CIVILIAN PERSONNEL MANAGER AND COMMANDERS OF AVIATION OPERATIONS

1. PLEASE INDICATE THE NUMBER OF PEOPLE YOU EMPLOY IN EACH CATEGORY. IF YOU ARE NOT CERTAIN, PLEASE ESTIMATE.
2. RETURN THE COMPLETED FORM IN THE ENCLOSED ENVELOPE.

OCCUPATION TITLE PART-TIME PT FULL-TIME FT	NUMBER CURRENTLY EMPLOYED		NUMBER HIRED THIS YEAR 1970		NUMBER TERMINATED EMPLOYMENT 1970		ADDITIONAL PERSONNEL PRESENTLY NEEDED		TOTAL NUMBER OF ANTICIPATED WORKERS NEEDED FULL-TIME BY		EDUCATION LEVEL FOR POSITION	LABOR SUPPLY	GS GRADE OR APPROXIMATELY
	FT	PT	FT	PT	FT	PT	FT	PT	SEPT. 71	SEPT. 74	CODE 1	CODE 2	SALARY RANGE
COMMERCIAL PILOTS (FIXED WING AND ROTARY WING)													
1. TEST AIRCRAFT													
2. TRANSPORT VIP'S													
3. GENERAL FLIGHT													
4. OTHER (SPECIFY)													
PILOTS (ROTARY WING ONLY)													
AVIONICS (ELECTRONIC EQUIPMENT INSTALLATION AND MAINTENANCE)													
1. MECHANICS	2								2	1	4	2	$7-$9/hr.
2. TECHNICIANS	1									1	4	2	$7-$10/hr.
3. ENGINEERS													
AIRCRAFT AND POWER PLANT PERSONNEL (SERVICE AND REPAIR MECHANICS)													
1. JET ENGINE MECHANICS	92				5						4	3	GS 2
2. PISTON ENGINE MECHANICS	38				5							3	"
3. HELICOPTER MECHANICS	2				5								
4. PROPELLER MECHANICS	4				5								
5. HYDRAULIC SYSTEMS MECHANICS	12				5								
6. INSTRUMENT AND CONTROL SYSTEMS MECHANICS	12				5								
7. OXYGEN SYSTEMS MECHANICS	12				5								
8. FLIGHT LINE MECHANICS	19				5							3	"
9. SHEET METAL MECHANICS	8				5							3	"
10. GENERAL MECHANICS	58				5							3	"
11. OTHERS (SPECIFY)													
A. Test Mechanics	16											3	"
B. Machinist	27											3	"
C.													
AIR TRAFFIC CONTROL PERSONNEL (NOT EMPLOYED BY FAA)													

CODE 1:
1. NONE ESTABLISHED
2. HIGH SCHOOL NOT REQUIRED
3. HIGH SCHOOL GRADUATE
4. COMPLETION POST SECONDARY VOCATIONAL OR 1 YEAR OF COLLEGE
5. SOME COLLEGE - 2 YEARS
6. COLLEGE DEGREE - 4 YEARS

CODE 2:
1. SCARCE
2. ADEQUATE
3. SURPLUS

PROVIDE ANY COMMENT YOU FEEL MAY ASSIST US IN OUR ENDEAVOR:

CONFIDENTIAL

NEW JERSEY 145 mailed
36 replied

STATE DEPARTMENT OF EDUCATION
AVIATION EMPLOYMENT SURVEY
FIXED BASE OPERATOR OR AIRPORT MANAGER AND REPAIR STATIONS

CONFIDENTIAL

1. PLEASE INDICATE THE NUMBER OF PEOPLE YOU EMPLOY IN EACH CATEGORY. IF YOU ARE NOT CERTAIN, PLEASE ESTIMATE.
2. RETURN THE COMPLETED FORM IN THE ENCLOSED ENVELOPE.

OCCUPATION TITLE PART-TIME - PT FULL-TIME - FT	NUMBER CURRENTLY EMPLOYED		NUMBER HIRED THIS YEAR 1970		NUMBER TERMINATED EMPLOYMENT 1970		ADDITIONAL PERSONNEL PRESENTLY NEEDED		TOTAL NUMBER OF ANTICIPATED WORKERS NEEDED FULL-TIME BY		EDUCATION LEVEL FOR POSITION CODE 1	LABOR SUPPLY CODE 2	APPROXIMATE SALARY RANGE
	FT	PT	FT	PT	FT	PT	FT	PT	SEPT. 71 1 YR.	SEPT. 74 3 YRS.			
A&P MECHANICS	165	10	24	9	18	8	9	2	12	22	3,4	2	$5-$8/hr.
AVIATION MECHANICS (WITHOUT LICENSE)	88	4	2	2	2	1			3	6	3	2	$2-$7/hr.
AVIONIC SHOP PERSONNEL	13		1				2		2	4	4	3	$4-$6/hr.
AIR TRAFFIC CONTROL PERSONNEL (PRIVATE TOWER ONLY)	1										3	3	$4/hr.
COMMERCIAL & AIR PILOTS	68	42	14	7	7	1	3	2	12	38	3,5	3	$2-$15/hr.
FROM THE ABOVE PILOT LISTING INDICATE BELOW HOW THEY ARE UTILIZED:	FT 1	PT	FT	PT	FT	PT	FT	PT	1 YR.	3 YRS.	CODE 1 3	CODE 2 3	SALARY
COMMUTER AIRLINE	24		6		1				4	14	6	3	$7-$9/hr.
CHARTER	18	6	4	1	2				1	5	1	3	$3-$10/hr.
AIR TAXI	4	1	1		1					2	5	3	$3-$8/hr.
INSTRUMENT INSTRUCTOR	19	12	2	3	2			1	6	12	1,3	3	$3-$7/hr.
FLIGHT INSTRUCTOR	29	34	2		2				4	2	3	3	$2-$9/hr.
GROUND INSTRUCTION	10	3	2	1					2	2		3	$3-$7/hr.
GROUND INSTRUCTION, (NON PILOT)	1												
OTHER (SPECIFY) Sales	2		1		1		1			2	4	1	

CODE 1:
1. NONE ESTABLISHED
2. HIGH SCHOOL NOT REQUIRED
3. HIGH SCHOOL GRADUATE
4. COMPLETION POST SECONDARY - VOCATIONAL OR 1 YEAR OF COLLEGE
5. SOME COLLEGE - 2 YR.
6. COLLEGE DEGREE - 4 YR.

CODE 2:
1. SCARCE
2. ADEQUATE
3. SURPLUS

PLEASE CHECK THE APPROPRIATE ANSWER:

1. WHICH OF THE FOLLOWING AREAS IN BUSINESS OF FLIGHT INSTRUCTION ARE YOU ENGAGED?

___ A. PRIVATE LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___

___ B. COMMERCIAL LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___

___ C. INSTRUMENT LICENSE - F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___

___ D. MULTI-ENGINE LICENSE F.A.A. APPROVED (1) YES ___ (2) NO ___
V.A. APPROVED (3) YES ___ (4) NO ___

PLEASE PROVIDE THE FOLLOWING:

NO. OF AIRPLANES YOU OPERATE & NO. BASED AT FACILITY
OPERATE - OPE BASED - BSD

FIXED WING AIRCRAFT				ROTARY WING AIRCRAFT	
SINGLE ENGINE		MULTI ENGINE			
OPE	BSD	OPE	BSD	OPE	BSD
257	1058	34	174	17	11

PROVIDE ANY COMMENT YOU FEEL MAY ASSIST US IN OUR ENDEAVOR:

INSTITUTIONAL EVALUATION: A COMPREHENSIVE FOLLOW-UP OF ALL ENTRANTS TO THE CATONSVILLE COMMUNITY COLLEGE FROM 1966 THROUGH 1968

Catonsville Community College,

Catonsville, Md.

$25,703

108

"Institutional Evaluation: A Comprehensive Follow-up of All Entrants to the Catonsville Community College from Autumn 1966 through Autumn 1968" was granted funding under the Vocational Education Amendments of 1968 and the Maryland State Plan for Vocational Education in mid-spring, 1971. Given the composition of the population of the study and the then current commitments of the Office of Institutional Research, preliminary work of a basic and limited nature was conducted. The extent of this preliminary effort will be presented following a description of the study. The project description will serve the purpose of providing a framework within which work progress can be placed and should alleviate redundancy of explanations.

Purpose of the Study:

On the surface, comparison of community college graduates with members entering the freshman class two years previously shows a low completion ratio. Informal data indicates that not all those who failed to graduate were casualties. This data is consistent with that of a recently conducted study with a national sample of community colleges. Ironically, considering the national scope of this phenomena, few researched answers have been forthcoming which seek to determine what happens to these students and, indeed, examine the effects of his community college on the individual student. This lack of knowledge, especially about the career-vocational student, is of paramount concern to community colleges. Career-vocational programs, unlike transfer programs, serve two entities: both the individual student and selected manpower needs of the local community. Thus, the output success measure of career-vocational programs is not necessarily nor solely whether a student has graduated; rather, it is also a measure of the student's ability and capabilities to secure local employment for which he has been prepared at the community college and where his performance and achievements are satisfactory both to himself and his employer.

In order to insure continuous improvement of education designed to achieve these outcomes, program evaluation is required and this is achieved only by examining the impact of the community college and career-vocational program upon former students. This impact may be comprehensively evaluated by utilization of the systems approach. The characteristics of the entering student, (his cognitive, skill and affective needs), his perception of his institution's environment, services and abilities to meet his needs may, after his enrollment and stay at his institution, be related to:

a. His perception of his employment (success, satisfaction-dissatisfaction).

b. Formal continued education after leaving his institution.

c. Explanations for terminating education at this institution before a degree was granted.

d. Involvement and/or contributions to community life after leaving his institution,

and these factors related to his perceptions of the degree to which his cognitive, skill and affective needs were met at his institution.

If results of this examination are to be useful and meaningful in identifying needed program or college service alterations, the uniqueness of the career-vocational student must be assessed; a comparison between these students and transfer students will permit this and also pragmatic functions of the resultant data.

This study aims at following up all students who entered Catonsville Community College from Autumn 1966 to Autumn 1968, to determine the path each took, to determine the number who were academic casualties, to determine the number who transferred upon receipt of a degree, to determine how many entered occupations for which they were preparing in advance of completion of program, to determine the unique characteristics and needs of career-vocational students in the cognitive, skill and affective areas, and to determine the attributes of career-vocational programs and services of Catonsville Community College which fulfill these needs. A model will be developed for this comprehensive assessment which will be generalizable to other community colleges.

Objectives of the Study:

1. To follow-up all new entrants from Fall 1966 through Fall 1968 to determine their current job and educational status, their status after terminating at the College, the unique characteristics and needs which they possessed at entry to the College, their perceptions of the College's fulfillment of their affective, skill and cognitive needs and the relationship of these perceptions to termination of program, graduation, transferment, job success and satisfaction, and further educational success and satisfaction.

2. To contrast the factors previously defined between the career-vocational (terminal) and liberal arts (tranfer) students in order to assess the impact of the College, its environment and programs, upon the career-vocational student and determine those characteristics which differentiate him and have implications for college service and program improvement.

3. To accomplish the program within one year.

4. To analyze the results of the one-year program and make recommendations for the implementation of a regular program of longitudinal study of students which will provide pragmatically useful data in program and college evaluation.

Accomplishments through June 30, 1971

By the time that formal project approval was received, the Office of Institutional Research was committed to other projects to the extent that it was able to devote less time than desired to this project. Consequently, permission was granted to carry-over funds. However, the nature of the population to be studied--students who had entered Catonsville Community College some years before, the storage of student information at the College--a storage system which had undergone at least three other extensive changes in the past five years and the interest in generalizable accountability systems expressed by contemporaries at other Maryland community colleges conspired to organize the initial work undertaken.

The Organizing and Ordering of Demographic Student Data:

A great deal of demographic data is maintained by the College for each entrant. During the years the population of this study attended the College, data was maintained both in the student's master record file and on data processing cards. Originally it was thought that all information required, e.g., age, QPA, major, withdrawal, graduation or transfer code, etc., could be obtained from data processing cards. This was not the case. Data which could be retrieved from these cards was selected and prepared in a usable format. Data which could be retrieved only from a student's master file was identified and will have to be hand captured.

Through an oversight, data processing cards containing the student's identification number, name and address had been discarded. Considerable time was devoted to creating such cards from printed student directories. Addresses were up-dated to the extent possible; given the mobility of people in Baltimore County, inability to locate former students will undoubtedly be a rather serious problem. Three address labels were printed for each student to permit easy identification of those who had responded and the mailing of a second questionnaire to those not responding within a set time period. These address labels were also organized by date of entry, sex and program area so that a constant tab could be maintained on the percentage of respondents in each classification.

The Developing of a Questionnaire:

The assumption was made that most former entrants would be living away from the home in which they resided while attending the College. Some would be at colleges and universities but many would have residences of their own. Building upon previous researchers' experience with like populations, namely, that it is much more likely that these persons will be at parental homes during holidays, it was decided to mail the questionnaire during November. This allowed unanticipated and additional time to be spent in the development of the questionnaire.

This time was spent in three ways. First, considerable energy was devoted to reviewing relevant literature, research and questionnaires.

Second, time was devoted to exploring the possibility of using a questionnaire form which would be capable of being scanned by machine. It was felt that this would be efficient from the point of view of both the respondent and researcher.

Third, informal discussions were held with faculty and counselors. These discussions were used to "try-out" hypotheses unearthered in the view of relevant literature and glean additional ideas.

A questionnaire was not finalized and, therefore, not submitted to concerned faculty and counselors for comments; nor was a firm decision made concerning a form which would be capable of being machine scanned.

The Developing of a Generalizable Model for Student Assessment:

One of the primary purposes of this study is to develop a model for student assessment which could be used by other Maryland Community Colleges. Two fortuitous occurrences enhanced the achievement of this goal. First, the formation into an organized group of persons in institutional research in Maryland Community Colleges allowed a ready group to respond to ideas and generated personal friendships which permitted honesty and candor. The value this group has and will perform cannot be underestimated for, ultimately, they can be the beneficiaries of the student assessment model. Second, a Maryland State Department of Vocational Education Committee charged with the responsibility of generating a follow-up of vocational-career students in community colleges invited this researcher to join their ranks. This association, besides providing an expanded "sounding board", acquainted the researcher with information needs of organizations beyond the colleges themselves. Many ideas which find their way into the study will undoubtedly be inadvertently plagarized from these encounters. Much remains to be done. The questionnaire must be finalized; decisions made concerning its format; some student demographic information collected by hand and joined with that data already collected and responses to the questionnaire; computer programs written and/or a system designed so required tabulations can be efficiently accomplished; and, the writing of the final report. These should be accomplished by late Spring, 1972.

INVESTIGATING RELATIONSHIPS BETWEEN HIGH SCHOOL AND COMMUNITY COLLEGE OCCUPATIONAL PROGRAMS AND IMPLEMENTING PROCEDURES ON AN EXPERIMENTAL BASIS

Catonsville Community College,

Catonsville, Md.

$12,005

This project was originally submitted as "INVESTIGATING RELATIONSHIPS BETWEEN HIGH SCHOOL AND COMMUNITY COLLEGE OCCUPATIONAL PROGRAMS AND IMPLEMENTING PROCEDURES ON AN EXPERIMENTAL BASIS" by Joseph P. Murray, Development Officer. Funds were requested for 1970-71 in the amount of $12,005.00. The focus of the study has been slightly altered to allow for a more thorough analysis of the articulation and dissemination process between this College and high schools, particularly vocational high schools, which preliminary research indicated was a necessity before an experimental program in both guidance and curricular areas should be implemented.

Problem Statement:

The junior college, an institution standing between high school and four-year college, has devoted most of its inter-institutional energies to developing better relations with the latter. Maryland Community Colleges, having grown out of the school system, ought to devote more attention - especially in occupational areas - to developing better relations with high school career/vocational programs and their graduates. The study aims at examining the communication process and mechanisms which serve to articulate the career programs at this institution (a) to potential students, with particular attention directed towards those with high school vocational education backgrounds, and (b) to the related high school vocational education programs themselves. This examination of the communication process and its mechanisms seeks to discover areas in which potential students, particularly those with high school vocational education backgrounds, require additional, deleted or altered information about the career programs at this College and recommend devices to disseminate this information; it also seeks to locate domains in which program continuity between grades 11 - 14 may be achieved and/or improved and propose articulative mechanisms to achieve this continuity.

Program Need:

The research in this area is very limited. A thorough search has been made of the current work in this area and need for extensive, additional research is indicated. Current projects with a bearing include Operation Bridgeheads in New York and the Richmond Plan which is operative in California. A doctoral dissertation which is being completed at Columbia University is directly applicable. What is needed is for an operating college within a system to use existing channels to explore the articulation process, mechanisms, and contents and, on the basis of this assessment, outline an improved articulation plan encompassing process, mechanisms and content which is capable of being implemented within the parameters of the institutional systems. Results of such actual, rather than theoretical, findings would be generalizable to other Maryland school-college systems and to institutions in other states which have similar concerns and operate within similar systems.

Objectives:

1. To discover what relationships currently exist in occupational areas between high schools and the community college.

2. To examine the mechanisms and content of these relationships as they exist and affect the potential community college career student, with the focus upon those with vocational education high school backgrounds.

3. To examine the mechanisms and content of these relationships as they exist and affect both the high school and community college related career-vocational programs in terms of such occurrences as curricular additions and alterations.

4. To research other developments across the country and determine if they have applicability to the local situation.

5. To analyze the findings realized in Objectives 1 - 4 in terms of the existing institutional system, determine needed alterations and suggest content and feasible communication mechanisms to achieve these recommendations in both the areas of guidance-student personnel career information dissemination and curricular planning and coordination in vocational education-career programs.

6. To accomplish the program within 12 months.

7. To analyze the results of the research and make recommendations for continuing relationships both locally and in other similar situations.

Hypotheses:

1. Information, communication, and interaction are all necessary components of an effective system which articulates high school and community college occupational programs.

2. Mechanisms do not exist which allow or encourage high school and community college faculty to carry on significant dialogue in curricular planning and coordination.

3. The concept of the pre-technical program is not operative at the local level.

4. There are no joint high school - community college programs covering grades 11 - 14.

5. Mechanisms do exist which allow high school and community college counselors to carry on dialogue in dissemination of college program information, but these mechanisms are sporadically operative and occasionally functional.

6. The content of the communication process, especially that which concerns college entering vocational-career students with vocational high school backgrounds, is not adequate for the special needs of these students, e.g., transfer potentialities.

7. No current mechanisms exist for giving impetus to students to continue their occupational education after grade 12.

8. 20 - 30% of students in high school occupational programs would go on to community college programs if more effective relationships between the two existed.

Procedures:

1. Investigate and synthesize past and current research in this area including New York and California operations.

2. Investigate the local situation (faculty, administration, counselors and students) through analysis of organization charts, descriptions of job functions, planned calendar events, academic records, and personal interview to determine the communication process and elements; specifically, what is being done, by whom, what is needed, and the areas in which fruitful work might be accomplished.

3. Hold planning conferences between related high school and community college educators - administrators, counselors, occupational faculty - to discuss needs resultant from the analysis of the local situation, to examine communication devices which would enhance articulation and to propose a communication process and content amenable to the existing system, which would meet indicated needs.

4. Prepare a document which describes the existing system, focuses upon the communication process, outlines the techniques used to analyze the process as one both formal and informal, and suggests content and process improvements to meet articulation gaps.

5. Disseminate the final report to administrators and coordinators of career programs in Maryland community colleges; to guidance counselors and department chairmen at Maryland vocational high schools; to the ERIC Center

at the University of California at Los Angeles; and to other interested and concerned individuals and institutions.

6. Design and prepare a research proposal to be submitted for funding the following year to the Maryland State Department of Education, Division of Vocational Education, which translates identified needs into a guidance and curricular experimental program and provides for controlled evaluation.

Time Schedule:

1. September 1971 - Procedure (1) completed.
2. February 1972 - Procedure (2) completed.
3. April 1972 - Procedure (3) completed.
4. July 1972 - Procedure (4) and (5) completed.
5. September 1972 - Procedure (6) completed.

Personnel:

Principal Investigator - Miss Cheryl Opacinch

Secretary - Mrs. Nancy Day

Various school and Community College personnel

Coordination:

The research project is not specifically coordinated with any other program either at the College or elsewhere.

Facilities:

The research program will be carried out, for the most part, on the campus of the College. Experimentation will take place in selected area schools. Meetings and conferences will be held on campus. One trip to California and one to New York will be required to check into operating programs.

Dissemination:

It is planned that the Final Report of the project will be disseminated on the local level, to other Maryland educators and the State Department, and to interested individuals across the country who may request a copy. The report will be sent to the American Vocational Association, the appropriate division of the United States Office of Education, the ERIC Center in California, and the American Association of Junior Colleges.

VOCATIONAL EDUCATION EVALUATION AND NEEDS ASSESSMENT FOR BALTIMORE COUNTY PUBLIC SCHOOLS

Baltimore County

$28,390

VOCATIONAL EDUCATION EVALUATION AND NEEDS ASSESSMENT FOR BALTIMORE COUNTY PUBLIC SCHOOLS

Background

In October 1970, a Vocational-Technical Advisory Committee made up of Baltimore County citizens and school personnel recommended that a study be made to appraise the county's vocational education program. The appraisal was to have a dual focus. First, examine the existing vocational education program, and what needs seem to be evident; and second, make recommendations concerning the future of the program.

In the spring of 1971, a study project was drafted, funded, and has been in process for the past year. During this time, coordination of the study effort has been provided by a steering committee composed of members from the various offices concerned with vocational education. The steering committee met on a monthly basis and on other occasions when it was necessary. In addition, a project coordinator was appointed to conduct the various activities necessary to fulfill the purpose of the project. The project coordinator, in addition to being a member of the steering committee, met with local school personnel, people from industry, union officials, state department personnel, personnel from employment agencies, and census personnel.

The information obtained from these agencies and people provided one source of data for the project. Other sources of information included area subcommittees of school personnel and a needs assessment survey conducted among the various groups concerned with vocational education.

During the time the study was being made, the concept of Career Education was proposed nationally as a vital and unifying dimension of education. The concept of Career Education has become incorporated into the study and has become a focus for future curriculum plans in the county.

Project Status

The project was designed to appraise vocational education in Baltimore County and make recommendations for future direction of the program. This general intent was operationalized by conducting a needs assessment survey and obtaining information related to eight project objectives. A description of the findings of the needs assessment survey and a brief analysis of the status of the eight objectives will be made in this section of the release.

Needs Assessment Survey

The "Career Education Survey and Goal Assessment" was conducted in partial fulfillment of the objectives of the Baltimore County "Vocational Education Study". The proposed objectives and goals included in the assessment instrument were assembled from a variety of sources, local, state, and national. The survey was organized around six major objectives with a listing of goals for each objective area.

The immediate purpose of this instrument was to provide for and develop a base of common understanding and consensus regarding the goals of career and vocational education in Baltimore County.

The survey was distributed to a cross section of 524 educators and other interested persons. Response to the survey was received from 336 individuals for a return of 64 percent.

Respondents were asked to assess the "importance" of each proposed goal, as well as the "degree to which each goal was being met". Options in the rating scale on degree of importance allowed for indications "Very Important", "Important", and "Not Important". Ninety-six percent of all responses indicated that the proposed goals were either "Important" or "Very Important". Options in the rating scale on degree to which the goal is being met allowed for indications of "Excellent", "Very Good", "Fair", and "Poor". Ninety percent of the responses indicated that the goals were being met to a "Fair" or "Poor" degree.

Survey respondents were divided into eight groups for comparison purposes. Responses for each group were tabulated and rank ordered. The most notable difference in response among groups occurred in the degree of importance for providing occupational orientation for elementary school students.

Response to the importance of this goal was considerably stronger among those respondents who had been exposed to the "Career Education" developmental concept. Responses otherwise among the various groups indicated little difference of opinion.

Responses to the 139 goals proved of interest in all cases; however, several major areas of interest emerged and are due mention in this brief summary.

The strongest responses occurred in the following goal areas:

1. All students, boys and girls, should be prepared for productive employment and/or further education.

2. All resources should be directed toward developing a favorable image toward the world of work.

3. Occupational information and orientation should be provided through an interdisciplinary approach. This would require the coordinated efforts of the Curriculum Office, the Guidance Office, and other units responsible for career programs. A Career Education Resource Center should be established.

4. Career education programs and facilities should be accessible to all students, allowing multiple career options.

5. Special attention should be devoted to providing career programs for dropout prone students.

6. Expansion of information disseminating activities should be accomplished to promote the career education concept among school personnel and interested citizens.

7. Continuing career education at all levels should receive special attention. Articulation should be evident regarding continuing and adult level career programs.

8. Special attention should be given to career education inservice and staff development activities.

9. Long-range planning involving industry, business, and the community was noted as important and will be incorporated into the future dimension of career education programs.

OBJECTIVE ONE: To Make Recommendations For Career Programs and Job Development Including Job Placement

Recommendations pertaining to this objective can be subsumed within two headings: (1) a general acceptance of the career education concept, and (2) proposed refinements and/or expansions of proposed and existing programs. The steering committee has accepted a broad definition of career education and will make suggestions for the implementation of the concept. The suggestions for implementation would include inservice preparation, different career experiences for school personnel, and the identification of existing curriculum that considers careers. To some extent implementation of the concept of career education has begun. The county's guidance program, for example, will concentrate their entire inservice program for counselors for 1972-73 school year on career education. Part of the inservice program activities will focus on the integration of a newly developed Career Development Model K-12.

A related recommendation will suggest the development of a clearinghouse mechanism for the collection, indexing, and dissemination of career education materials. Initial plans for such a mechanism are being formulated at the Western Vocational-Technical Center.

Included under the second heading for the first objective will be recommendations concerning the expansion and/or refinement of existing career education, vocational type programs. Expansion is suggested for the following existing programs: the Career Studies Program, the Occupational Information Course, the Summer Exploratory Vocation Program, the Mobile Unit for Vocational Evaluation. Curriculum development, including career education objectives, has commenced in the county's Industrial Arts program. The initial phase of a five-year Industrial Arts curriculum development effort began during the summer of 1972. Coordinated, more or less simultaneously, with the curriculum development aspects of the Industrial Arts program will be inservice programs and related activities for teachers.

The steering committee will suggest that a comprehensive study be made of the Cooperative Education Program in the county. Specific concerns relating to (1) the coordination of the Cooperative Education Program and job placement among the various offices concerned with the program, (2) when students should be initially exposed to the program, (3) the magnitude of student involvement, and (4) the role of Cooperative Education with select groups of students, will be some of the questions addressed in the study.

OBJECTIVE TWO: To Determine Methods of Curriculum Development For Vocational Offerings

A variety of options will be suggested for the development of vocational curriculum offerings. The recommendations proposed by the steering committee for this objective will deal more with the coordination of the offerings developed. For coordinating purposes it will be recommended that one of the duties of the Countywide Professional Advisory Committee, which will be formed as a result of the study, will be that of coordinating newly developed course offerings among the various offices concerned with vocational education, the inclusion of the proposed offerings in the county's annual and long-range plans, and the integration of these offerings with the total school system curriculum. A related duty of the Advisory Committee will be to meet with people in industry and coordinate the needs of industry, various occupations, and union requirements.

A second recommendation will suggest that a five-year summer workshop effort be established to plan and develop future vocational offerings. The complementary components of (1) new vocational and career curriculum offerings and (2) plans for the staff development of teachers would be the main focus of the workshops.

OBJECTIVE THREE: To Plan Phase II For Western Vocational-Technical Center

The plans for the second phase of the Western Vocational-Technical Center are in the final stages of implementation. At this time a final disposition is being awaited from the Maryland State Department of Education, Division of Vocational Education, and the Maryland State Inter-agency on School Building Construction.

Phase II as developed at the Western Vocational-Technical Center includes an expansion in the physical plant to service approximately 650-675 more students in two sessions, one in the morning, one in the afternoon. This would be in addition to approximately 550 students currently enrolled at the center. New course offerings will include trowel trades, electrical construction, plumbing and heating, air conditioning and refrigeration, welding, graphic arts, landscape construction and maintenance, a special education workshop, a child care workshop. Course expansions are planned in the areas of electronics and data processing.

Space has also been included for a clearinghouse on career education.

OBJECTIVE FOUR: To Plan Phase II For Eastern Vocational-Technical High School

The plans for the second phase of the Eastern Vocational-Technical School have been developed at the school level. Over the past six or eight months the school personnel have been meeting with the staff of the Division of Vocational Education from the Maryland State Department of Education concerning specifics of the proposed plan. At this time the school plans are about ready to be formally submitted to the Division of

Vocational Education for a disposition, suggested changes, etc.

Phase II as developed by the school personnel at Eastern Vocational-Technical School includes an expansion in the physical plant to accommodate approximately 350 more full-time students. This is in addition to approximately 675 currently enrolled at the school. New courses will be offered in diesel mechanics, commercial art, air conditioning and refrigeration, plumbing and heating, business occupations, and health. Expansions to service more students in existing programs are planned in welding. Many of the courses are planned as part of program clusters.

Academic additions planned for the second phase of Eastern Vocational-Technical School include 14 classrooms, one music room, one activity room, and office space.

OBJECTIVE FIVE: To Determine The Final Phase For Dundalk-Vocational-Technical Center

Recommendations concerning the Final Phase for Dundalk Vocational-Technical Center are somewhat more involved than the second phases of Eastern Vocational-Technical School or the Western Vocational-Technical Center. In the years prior to 1966, the Dundalk Vocational-Technical Center served as a secondary school in a physical plant suited for that purpose, but not ideally planned to be converted to a vocational unit. Since the beginning, the question has been raised as to whether it would be more appropriate to build a new vocational unit or plan to renovate and remodel the existing physical plant to more adequately accommodate vocational programs. Reflecting on present realities and recognizing the time and effort that has gone into earlier developmental phases of the

Dundalk Vocational-Technical Center, the Steering Committee recommended that the existing physical plant should be renovated and remodeled. The recommendations concerning the final phase for Dundalk Vocational-Technical Center will be made with this determination in mind.

The final phase of the Dundalk Vocational-Technical Center as developed by the school staff focuses more on renovating and remodeling the existing physical plant than on servicing more students. Over the years, the enrollment at the school has increased to 554 in the 1971-72 school year. For the school year 1972-73, it is anticipated that in excess of 625 students will be enrolled in fourteen programs. The proposed final phase of the Dundalk Vocational-Technical Center focuses on the renovation of the existing physical plant to more adequately service a student population slightly larger than at present.

In addition to changes in the physical plant, new programs will be offered in maintenance mechanics, construction carpentry, and metals technologies. An expanded program would be offered in auto mechanics.

OBJECTIVE SIX: To Survey And Pre-Plan For Future Vocational Schools Or Centers For The Northwestern And Central Areas Of The County

At the present time there are no vocational units in the general northwestern and central areas of Baltimore County. Some students do attend vocational programs within comprehensive high schools or attend vocational units in other areas of the county. The meetings held over the past year and related surveys conducted indicate that substantially more students would be involved in vocational programs if facilities were available within reasonable travel distance and if programs were available and designed in such a way as to reflect the student population of the areas.

The recommendations of the steering committee suggest the establishment of two vocational units in the areas of concern in this objective. One unit would be located conveniently as possible in the northwestern area, the other in the central area. The units should be phased in over a number of years, with initial planning and site acquisition beginning as soon as possible.

A second recommendation is concerned with vocational programs in these units and suggests that programs be flexible, diversified, and relate to the unique population of these areas. Over the course of the year a listing of possible course offerings for these areas has been developed. Elevan different clusters of vocational courses are included on the list. They include the following: construction cluster, consumer and homemaking cluster, health occupation cluster, marketing and distribution cluster, business and office occupation cluster, communication and media cluster, transportation cluster, service occupations cluster, general services cluster, food services cluster, and technical cluster.

OBJECTIVE SEVEN: To Update Job Opportunity Information In The Baltimore Metropolitan Area

A review was made of available information provided by local, state, and national offices. Much of the information obtained was either incomplete or was not recent enough to provide for valid projection for planning programs for the future. Occupational projections in most cases provide only figures for need or expansion without indicating the projected supply. The latest and most comprehensive information resulted from a study by the Mayor's office, Baltimore City, during 1972. The occupational information gathered, although not as complete as desired, was used in developing plans for expansion of vocational programs and for the addition of new programs as well as for recommending curriculum revisions in several programs.

Consideration was given to conducting an independent survey of occupational opportunity, but this idea was dropped following advice from the Department of Employment Security, State of Maryland, regarding the time and complexity involved in such a study. It is our recommendation that we in Baltimore County support a continuing thorough occupational opportunity information study to be conducted by one central agency.

OBJECTIVE EIGHT: To Study Local Population Trends and Georgraphical Distributions As They Apply To Secondary Schools

A review of available data was made involving the study of information provided by local, state, and national offices. School population projections, Baltimore County planning directions as well as regional population projections, were studied for vocational planning implications. Information gleaned from these sources was considered in making recommendations for expansion of present vocational programs and facilities and for recommending two new vocational facilities.

COMPUTER ASSISTED INSTRUCTION IN OVERALL VOCATIONAL EDUCATION

Charles County Community College,
La Plata, Maryland

$100,000

INTRODUCTION

The purpose of this report is to describe the activities of the Charles County Community College's Computer Assisted Instruction project for Fiscal Year 1971. This report is primarily intended for the Director of the Research Coordination Unit, Division of Vocational Education, Maryland State Department of Education. The planning activities of this project are based upon a certain computer hardware configuration, but the same considerations should apply to other hardware systems.

This Program to Research the Overall Vocational Education (Project PROVE) involves the potential of CAI as a tool and technique for helping the vocational student meet his career goals. Other major objectives are (1) to develop a data bank containing demographic, psycho-metric, and achievement data on each participating student and (2) to develop and construct learning trees, with behavioral objectives, for career students in Pollution Abatement Technology, Estuarine Research Technology and Electronic Data Processing. The computer cannot think for itself, but it can be used to store ideas and thoughts and reveal these ideas and thoughts to students upon appropriate requests.

On January 28, 1970, a Preliminary Application to seek grant funds entitled "Research and Development for a Computer Assisted Instruction Center for Post-Secondary Vocational Projects" was submitted to the Maryland State Department of Education. This proposal stated the problem, program needs, basic objectives, time schedule, personnel, facilities and budget. Among the Charles County Community College's personnel needed were the following: Director of the Data Processing Department, Educational Specialist, Systems Analyst, faculty members, programmers and other operational staff. Also in August, 1970, the Director of the Data Processing Department attended a conference on CAI sponsored by IBM. This conference aided in determining the proper approach to the research project.

PLANNING

Research Prior to Funding

The project was initiated with an evaluation of the work which has been done in CAI throughout the United States and an examination of the available software which could possibly be modified for use on the current computer system. Several weeks of planning by the Dean of the College, his staff and the Director of Data Processing were necessary to establish the appropriate base to begin the CAI project.

The Director of the Data Processing Department attended a three-day seminar on CAI at Silver Spring, Maryland from September 14 thru 16, 1970 sponsored by Control Data Corporation. On October 16 the Educational Specialist was hired as a staff member of the college. This Specialist is responsible for properly planning the activities to insure that the objectives are accomplished in accordance with the proposal and that all components of the project are given adequate and proper attention. From November 11 thru 13, the Educational Specialist attended a NAUCAL Conference (National Association of Users of Computer Applications to Learning) at Washington, D. C. This national meeting proved to be very enlightening as to progress of CAI. The most beneficial information was obtained when a demonstration of the research project at Albert Einstein High School, Kensington, Maryland was given.

The CAI project, which uses the acronym PROVE, has been established as three major phases. The activities of each phase according to the master plan are designed as follows:

Phase I	Staff orientation and development (planning, in-service training, setting up CAI facility and laboratory situation)
Phase II	Try-out, adaption, research and evaluation, creation and production of prototype lesson packages
Phase III	Continue lesson package development, research and evaluation, redesign staff orientation programs, development of a model plan for incorporating CAI into all departments of the college and introducing CAI into the local vocational-technical schools, report writing and dissemination.

Objectives

The objectives of the project are clearly described in the project proposal and have been restated in more explicit, measurable terms in the master plan. The following objectives are stated in terms of accomplishment of the activities at the end of Phase II:

1. The designing, developing, conducting and documentating of training courses and orientation programs for college personnel. The program will cover the concepts necessary for the effective installation and use of CAI in a post-secondary institution.
2. The creation of a nucleus of technical and professional personnel within the college capable of translating CAI instructional strategies into Coursewriter III, the coding language.
3. The creation of a nucleus of instructors who are capable of developing instructional packages, for a given subject area, to be used in conjunction with the computer.
4. The development of an evaluation process to review and evaluate existing CAI materials that are available and adaptable to college use on the IBM System 360/30.
5. The description of the role of the college instructor in the CAI-equipped facility and identification of additional skills this role will require.
6. The production of CAI lesson packages for use on the IBM System 360/30.
7. The design and development of a model plan for the introduction and use of CAI in the college enviroment.
8. Dissemination of information on findings of the project.

Activities of Phase I to date

The progress of this project has been mainly in the areas of research and planning. The initial funding began February 12, 1971. A discussion on CAI and Coursewriter III, the language utilized with IBM System 360, with IBM representatives was held on February 22 and 25. Next, the required computer equipment was ordered (as more fully explained in another section). The Educational Specialist and the Director began recruiting other personnel. A Systems-Programmer was hired early in March. From March 8 thru 10, the Educational Specialist, Systems-Programmer, two programmers and two faculty members attended a Coursewriter III class at the IBM Educational Center, Washington, D. C. This class showed the basic components of the Coursewriter language, and applicable problems practiced.

On March 11, 1971, a meeting with four CAI personnel and two IBM representatives was held. An IBM Educational Specialist discussed his dealings with Coursewriter language and made numerous suggestions to aid in the research project. Also, he left a model manual for writing the course material to be presented to the students.

Research was continued by corresponding with various colleges and organizations throughout the United States to obtain more information on CAI progress. (As the need arises, correspondence is constantly flowing in and out throughout this entire research project.) In the meantime, a Gantt chart and PERT chart for Phase I of Project PROVE were designed.

On March 23, 1971 the Educational Specialist met with the Chairman of Pollution Abatement Technology to discuss the capabilities and limitation of CAI.

The faculty members of the college who will write segments of their course material are referred to as "authors." During the later part of March, an Author's Guide was written and compiled. This Guide will be utilized in training authors and serve as an invaluable aid in creating and designing course material.

Objectives of the master plan will be accomplished through the development of numerous sub-plans, each focusing attention on a vital component of Project PROVE. A list of the sub-plans together with a brief description are as follows:

1. Curriculum Development Sub-Plan includes procedures to be utilized in design and adaption of CAI lesson packages.
2. Staff Development Sub-Plan includes a description of orientation and training programs for personnel in CAI.
3. Project Management Sub-Plan includes policies, procedures and administrative processes for effective management; it also includes delineation of responsibilities.
4. Documentation Sub-Plan includes means and procedures of record keeping and dissemination of information and findings of project.
5. Evaluation Sub-Plan includes procedures to evaluate effectiveness of CAI materials and techniques; it also includes means and procedures by which collection of research data is made.

EQUIPMENT AND FACILITIES

Computer Configuration

The Charles County Community College already has an IBM 360/30 System in operation. To support the project, the following computer hardware was ordered in February:

- 1 Storage Protection Feature #7520
- 1 Interval Timer #4760
- Additional 64K Core Requirements
- 2 Disk Storage Drives
- 1 Data Adapter Unit (Model 1) #2702
- 1 Terminal Control Type I #4615
- 8 Line Adapters #4635
- 8 Communication Terminals #2740
- 8 Record Checking Units #6114
- 3 Disk Packs #1316

The above items will be rented from IBM.

Equipment Received to date

All of the above items have been installed except the eight communication terminals and half of the additional core. The remaining 32K core will be installed in November, 1971. Two of the communication terminals have been shipped for installation early in July 1971. The other six will be installed about the same time as the additional 32K core is installed.

CAI Office and Studio

Two adjoining rooms are presently being remodeled in the Occupational Center of the college to establish both the CAI Office and Studio. The CAI Studio is located adjacent to the computer room and data processing offices. On March 3, 1971, authorization was received for wiring and lighting modernization. On April 1, two telephones were installed in the CAI Office. On April 14, electrical outlets were installed in both areas, and the lighting improved. Plans to purchase some office furniture have been made, and several items have been ordered. The actual "moving in" will occur with the beginning of the new fiscal year.

STAFF ORIENTATION AND DEVELOPMENT

Activities to date

On February 26, 1971, at a monthly meeting of the Board of Trustees and other staff of the college, the CAI research project was formally first identified. As previously mentioned, the Educational Specialist was hired as well as a Systems-Programmer. The position of Project Analyst has been added to the CAI staff to act as a consultant to the authors and as liaison between the authors and the CAI Office. An individual with two and a half years' experience in CAI will join the staff on July 1, 1971. Also, six staff members have taken a class in Coursewriter III language coding. The Systems-Programmer and a technically-trained programmer attended a week's internals class in Coursewriter III following which they generated the Coursewriter III system for Project PROVE.

An Author's Guide has been completed and a brief in-house training workshop was conducted with six participants. This formal staff training program was preceded by an informal training of an author who is a part-time instructor of Numerical Analysis. Two other authors are writing course material to be ready for coding.

Staff development is to be a continuing effort throughout the project. The Educational Specialist visited Albert Einstein High School on March 2 to become acquainted with the operations of an active and successful CAI project. The benefit of this visit and recommendations received will greatly enhance the operation of Project PROVE

VOCATIONAL EDUCATION DEVELOPMENT PROJECT FOR DISADVANTAGED

Montgomery County Public Schools

$29,888

Sequential and Chronological Development of the Proposals for Students with Special Career Education Needs (Disadvantaged)

Title of Project: "Vocational Education Development Project for Disadvantaged" Code 19.0075

Transmitted to the Maryland State Department of Education by William C. Feddeman, July 1,1969 requesting approval as an exemplary program.

Duration of program was to be September 1970 to July 1971.

Federal funds requested for first year $29,888.

Approved by James Reid, February 12, 1971.

Dr. Richard E. Wagner, Associate Superintendent for Instructional and Pupil Services, assigned Mr. Elwood Mason the responsibility for organizing and implementing the approved proposal. Mr. Mason met with and consulted:

The Coordinator of Career Preparation
The Associate Superintendent for Instructional and Pupil Services
The Associate Superintendent for Administration
The Director of Human Relations
Three Area Assistant Superintendents
Three Area Directors of Instruction
Four Area Supervisors
Administrators of seven schools in three areas
Three school counselors
Three Area Community Coordinators
Four classroom teachers
The Director and Assistant Director of Research
Four Career Preparation Teacher-Specialists
Three Career Preparation Supervisors
Students in three schools
Four members of an advisory committee

Mr. Mason met several times with the area directors of instruction and area supervisors of Areas 4 and 6. They indicated a sincere desire to develop proposals for Career Preparation Programs for disadvantaged students in their areas. Because of the high percentage of disadvantaged families in these two geographic areas, the sincere commitments and desires to help these students by the staffs, it was decided to encourage their development of proposals.

General Information

The proposal submitted to the State on July 1, 1969 and approved by Mr. James Reid on February 12, 1971, specified the inclusion of:

1. The development of descriptors that could be used to describe and identify the disadvantaged students. (These are included in the proposals from Areas 4 and 6).

2. The identification of the career education needs of the students identified by the descriptors (detail for doing this are included in the submitted proposals).

3. The development of a program which could be implemented to meet the needs discovered in (2) of the students identified in (1). (The proposals describe how this program development and implementation will be done the first year and what is needed).

Proposed tentative time schedules are included for the first year of the program development and pupil evaluations. Some of the indications are made for the planned second year along with some projected equipment and staff needs.

These proposals for identifying some of the students with special needs (disadvantaged), their identified career education needs, programs proposed for implementation to meet the student needs, were developed by area and school staffs. Help and guidance were provided by Mr. Mason and other resource people requested by him.

The personnel that developed the proposals will also organize, implement and administer the programs. Supervisors, teacher-specialists, directors, counselors, psychologists, psychiatrists and any other resource people will provide supporting help and services when needed.

The following table lists the relationships for the 83 returnees which are of sufficient magnitude as to be important for predictive purposes. There was relatively little difference between the 63 who stayed and the 20 who redropped in terms of the significant relationships.

Table 2. Significant Relationships among 33 Variables on the SRS for the 83 Returnees

1. Reason for leaving related to how left

Discipline and/or attendance,	asked to leave by school
economic ,	own decision

2. Number of suspensions related to school success

fewer suspensions,	higher grade completed
fewer suspensions,	more likely to be working
fewer suspensions,	fewer grades in sr. high repeated
more suspensions ,	more siblings

3. Life goal related to school success

higher goal,	higher grade completed
higher goal,	fewer sr. high grades repeated
higher goal,	more likely to be working
higher grade,	both parents employed

4. Test scores related only to other test scores, not any of the above

The factor structure yielded similar patterns for the 63 TEL's and the 20 TEL's re-drops. Six factors were statistically verified and of these four have some logical basis for consideration. (It is entirely that when factor analysis is used to generate hypotheses instead of empirically confirming constructs that factors may arise which are statistically "pure," yet have no educational relevance).

Table 3. Relevant Factor Structure of SRS

Factor	I	II	III	IV
Name	Test Scores	Mother-School	Father-School	School Success
Variables	Standard tests	Employed	Schooling	Highest grade
		No. siblings	Employed	No. of grades repeated (sr. high)
		No. suspensions	No. of grades repeated (jr. high)	Why left
		Decision to leave	Mother's schooling	Job status life goal

E. Discussion:

It is clear that there are several important relationships among school variables and post-school activities. At the same time, the SRS gives little clue as to why the 20 returnees have dropped again; such differences as exist between the two groups are trivial. Further, it is interesting to note that the test scores fail to correlate with the dropout variables. This does not imply that test scores do not differentiate between dropouts and non-dropouts, but that within the group of 83 returnees, the test scores are of little use in predicting the other dropout variables.

It appears that school discipline problems (e.g. suspensions) and dropout are related phenomena, as well as post school aspirations and job status for the returnees. This confirms part of the Eau Claire, Wisconsin study (Benning, Feldhusen and Thurston, 1968) that classroom misbehavior, school dropout, and delinquency and reading retardation are related.

There are several triplets of variables which would also seem to be related, but since transitivity does not hold for correlation, these postulated relations need to be empirically confirmed.

1. suspensions, highest grade completed, and life goal are related
2. suspensions, highest grade completed, and job status are related
3. suspensions, grade completed, job status, and life goal are all interrelated

Thus, there are certain school behaviors which may be part of a chain of such behaviors characteristic of these 83 returnees.

Further study is planned of the 83 returnees compared to the remainder of the original 300 who did not return, as well as the control group of returnees.

Perhaps this study may lead to a County follow-up on TEL's as well as on graduates to try to ascertain variables predictive of TEL's behavior and returnees behavior which aid in planning programs for TEL's.

RESEARCH DESIGN FOR INTENSIVE COUNSELING OF DROPOUT PRONE YOUTH

In the four senior high schools involved in the Returnee Project, and which account for approximately 44% of the senior high school dropouts in Baltimore County, while accounting for 28% of the enrollment, it is anticipated that up to 200 pupils may be identified by the schools as highly probable dropouts for the current term.

The identified pupils will be placed into pairs, approximately matched on 10th grade SCAT scores. Then, one member of each pair will be randomly assigned to the experimental group (E-group) and one member to the contrast group (C-group).

The E-group will receive counseling at least once a week for the last third of the school year. The two counselors in this program are also involved in the ongoing dropout Returnee Project. The C-group will not receive any of the additional counseling, nor be knowingly identified with the project.

At the end of the school year the following comparisons will be made between the E and C groups:

1. Percent of each group still in school.
2. Percent of each group (excepting graduates) who indicate they will return to school in the fall.
3. Percent of seniors in each group who graduate.
4. Ratings of pupil behavior and attitudes in each group by school staff.
5. Percent of each group (excepting graduates) actually returning to school in the fall.
6. Percent of each group who after dropping from school become involved in some self-improvement program, e.g., (night school, high school equivalence, training)

* Office of Child Accounting - "Withdrawals other than transfers"
July '68 - June 30 '69

COMPREHENSIVE HOLDING POWER PROGRAM

I. To Date

Baltimore County schools annually have approximately 1,500 terminal early leavers and 6,500 graduates, thus about one of five who leave high school for good do not graduate.

In four southeastern area senior high schools 500 or about one of four leave but do not graduate. In this area last summer a survey was conducted by school counselors to find persons who would return to school. The schools indicated 300 who were acceptable have returned to regular day school. Of these:

1. 93 actually returned to day school. To date 70 are still attending, 11 have left to a job or family, 12 have left and are in evening school now.
2. About 100 said they would enroll in evening school or take high school equivalence tests. These are being contacted - most have not done what they said.
3. 100+ were moved, married and/or military (3M) and with rare exception just not interested in any of our services.

There were 200 other persons subject to survey:

1. 46 the schools said were beyond potential to deal with and should not be contacted at all.
2. 50+ were not found or simply not interested.
3. 99 were contacted about some school service other than regular day school, most (73) were receptive to further contact about evening school, high school equivalence or some other program. These have not been followed up yet.

II. Projection

Experience to date seems to indicate that much useful educational service can be provided to T.E.Ls at relatively little cost. For example, the survey alone can be extended to enough persons to fill Dulaney Senior High School at a cost of about $15,000. About 60% will want to do something about school; something that Baltimore County already has available.

Further, it seems entirely possible that many of the 3M category might be approached before their post high school situations become routinized and fixed.

If one-half of all county T.E.Ls can be provoked to finish high school even after a decision to leave school, the county could boast 9 of 10 school leavers are graduates. This does not appear unreasonable or overly costly when compared with one-half cost to operate Dulaney Senior High School.